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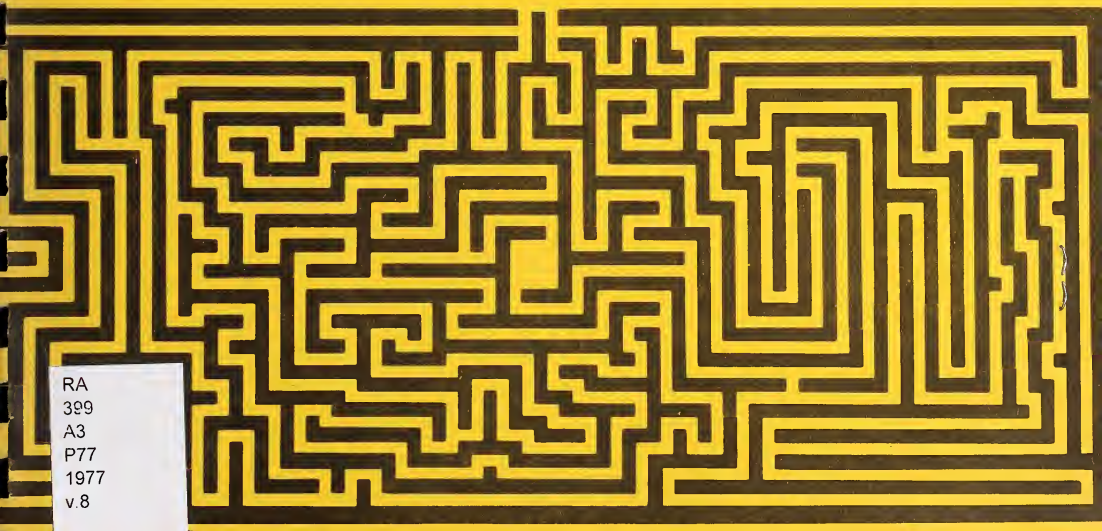
PSRO:
An Evaluation of the Professional Standards Review Organization

VOLUME 8:
THE COSTS OF UTILIZATION REVIEW PROGRAMS IN HOSPITALS AND IN PSROs



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VOLUME 8

THE COSTS OF UTILIZATION REVIEW PROGRAMS IN HOSPITALS AND PSROs

PSRO: AN EVALUATION OF PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS

October, 1977

Report Number: OPEL 77-12

Office of Planning, Evaluation, and Legislation
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PREFACE

This volume is part of the evaluation of the Professional Standards Review Organization (PSRO) program conducted during fiscal years 1976 and 1977 by the Office of Planning, Evaluation, and Legislation (OPEL) of the Health Services Administration, U. S. Public Health Service, Department of Health, Education, and Welfare. The emphasis of the evaluation was on program utilization control, quality assurance and cost-containment consequences, and program costs. The evaluation was conducted at a time when the PSRO program was in an early stage of implementation. It indicates what impact the PSRO program had achieved by the start of 1977, provides baseline data for future evaluative work, and offers tests of numerous quality assurance and utilization control evaluation methodologies. Summarized below are the evaluation's salient findings.

The evaluation's primary study was an analysis of Medicare utilization data compiled expressly for this evaluation. The Medicare analysis investigated the effects of the PSRO program on hospital days of care per 1,000 enrollees, admissions per 1,000 enrollees and average length of stay. Eighteen active PSRO areas were compared to twenty-six matched nonactive PSRO areas. No aggregate PSRO effect was found on the utilization variables studied. This implies that, as a "treatment," the PSRO program thus far has not impacted on Medicare utilization relative to other forms of utilization review being conducted in non-PSRO areas. Although no overall utilization savings were found, individual experiences varied. Some of the organizations were associated with lower (favorable) utilization, whereas others reflected higher (unfavorable) utilization than their matched comparison areas. These findings imply that, even though certain PSROs have demonstrated some degree of cost-effectiveness, the PSRO program as a national program is not now functioning as an effective cost-containment mechanism. Conclusions concerning appropriateness of care are inconclusive because both increases and decreases in utilization are consistent with heightened appropriateness of care.

An analysis of hospital discharge abstract data, primarily derived from the Commission on Professional and Hospital Activities (CPHA) Professional Activity Study (PAS) system, indicates that PSRO review tends to be associated with increases in case mix severity for Medicaid patients but not for Medicare patients. The same data indicate smaller (unfavorable) decreases in case mix adjusted average length of stay (ALOS) for Medicaid patients in hospitals under PSRO review than in non-PSRO comparison hospitals and greater (favorable) decreases in ALOS for Medicare patients. It was also found that, in some instances, the proportion of longer stays in PSRO hospitals experienced a relative decline. The ALOS findings, both favorable and unfavorable, were statistically significant yet rather small (on the order of two percent). The severity finding, although tentative for numerous methodological reasons, does suggest that PSROs may utilize bed days more efficiently.

Quality-oriented components of the PSRO program are just now being implemented. A study of a sample of medical care evaluation studies (MCEs) indicates that these studies were effective in identifying and correcting problems of medical care in hospitals. The number of initial audits reported has grown to over a thousand per quarter, but the number of re-audits reported is small. Choice of MCE topics is likely to reveal problem areas effectively but is not necessarily based upon a critical selection process. Profile analyses, which can aid in the focusing of both concurrent review (CR) and MCE studies, are implemented in only a few PSROs.

It was found that the estimated cost of a fully implemented acute care hospital PSRO program for Federal beneficiaries is $268.5 million.[1/] Associated Federal discharge unit costs are currently $18.31 for primarily delegated PSRO areas and $16.00 for primarily non-delegated PSRO areas. The PSRO program is more expensive than its predecessors. The cost of the original utilization review (UR) regulations was found to be $81.3 million,[1/] and implementation of the revised UR regulations would have cost about $107.6 million.[1/2/] In order to "recover" its costs, the PSRO program would have to reduce utilization rates of covered populations by 1.60 to 2.05 percent.

1/ Costs based on projections made in Volume 10 of the overall PSRO Evaluation Report.
2/ Original UR cost figure adjusted to 1976 cost levels.

The report cautions the reader against reaching final conclusions about the program because the evaluation was conducted during the time the program was in the developmental stage. However, data are sufficient to suggest strongly that continued PSRO implementation alone is not apt to cause significant changes in either hospital utilization rates or associated governmental expenditures.

Considerably more study is urged in several important areas as program development and implementation are continued. Many issues have been identified in the course of the evaluation that should be of value in deciding on the direction of future work.

October, 1977
Office of Planning, Evaluation, and Legislation
Health Services Administration
Public Health Service
Department of Health, Education, and Welfare

PSRO EVALUATION REPORT VOLUME STRUCTURE

Volume 1:	Executive Summary
Volume 2:	A Context for PSRO Evaluation: The Program and Evaluation Precedents
Volume 3:	Acute Care Utilization Impact: Some Data on the Medicare Experience
Volume 4:	Acute Care Utilization Impact: Inferences from a Sample of Hospital Abstract Data
Volume 5:	A Comprehensive Case Study: The Colorado PSRO Experience
Volume 6:	Case Studies of PSROs: A Contextual Analysis
Volume 7:	PSRO Quality Impacts: Inferences from the Medical Care Evaluations
Volume 8:	The Costs of Utilization Review Programs in Hospitals and in PSROs
Volume 9:	Acute Care Utilization Review Costs Associated with the Medicare/Medicaid Programs
Volume 10:	Acute Care Utilization Review Costs: Synthesis of Components and Estimates for a Fully-Implemented Program
Volume 11:	A Cost-Benefit Context for PSRO Utilization Control Activities

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1.0 INTRODUCTION AND SUMMARY OF THE STUDY OF INPATIENT UTILIZATION REVIEW COSTS IN HOSPITALS AND IN PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS

1.0 INTRODUCTION AND SUMMARY OF THE STUDY OF INPATIENT UTILIZATION REVIEW COSTS IN HOSPITALS AND IN PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS

The goal of this study was to identify the costs of delegated and nondelegated utilization review (UR) as it was practiced in 1976 for inpatients in acute care hospitals along with the costs involved at the Professional Standards Review Organization (PSRO) administrative level.

This information was needed as part of an overall PSRO program cost/benefit analysis to meet the Congressional mandate, as set forth in the original PSRO legislation, to evaluate the effectiveness of the PSRO program. Cost data collection in PSROs and hospitals and analysis was needed because:

- Data were not available on which to base reliable estimates of delegated review costs in hospitals
- Available PSRO administrative cost data (collected by the Bureau of Quality Assurance from PSROs) did not differentiate PSRO program start-up from operating costs

Macro Systems, Inc. (Macro), conducted the study under contract with the Office of Planning, Evaluation, and Legislation (OPEL) of the Health Services Administration (HSA), Department of Health, Education, and Welfare (HEW). This introduction provides an overview of the reporting, including a:

- Description of study objectives
- Definition of UR activities costed
- Summary of major findings
- Description of the organization of this report

1.1 Objectives Of The Study

The primary focus of this study was to identify the unit costs of delegated and nondelegated PSRO UR for inpatients in acute care hospitals as

well as related unit costs of administrative activities of associated PSROs. Cost data were also developed on inpatient utilization review in hospitals in 1976 in non-PSRO areas because such review (i.e., "new" UR performed under 1976 Medicare regulations) represents a currently functioning possible alternative to PSRO review. Also, to provide some historical perspective on UR expenditures, cost estimates for "old" UR[1/] for acute care hospital inpatients in 1974 were developed. The specific study objectives are identified below.

Study Objective 1: National Cost Of Acute Care Inpatient Review For Federal Patients

Estimate the operating cost of acute care inpatient PSRO UR for all federal patients (all patients whose care is funded by Medicare, Medicaid, or Maternal and Child Health programs, under Titles XVIII, XIX, and V, respectively, of the Social Security Act). This cost estimate shall exclude UR implementation and associated start-up costs. In addition, the extent of use of donated physician time should be identified because much currently donated time is expected to be reimbursed in the future.

Study Objective 2: National Cost Of Review For All Patients

Estimate the operating cost of acute care inpatient PSRO UR for all patients, federal and nonfederal. This estimate is similar to Objective 1 above, but represents the cost of full PSRO UR coverage under a National Health Insurance plan that includes everyone.

Study Objective 3: National Cost Of Old UR

Estimate the nationwide cost of old UR inpatient activities in 1974. This estimate focuses on activities done in compliance with the original Medicare UR regulations before they were amended on November 29, 1974, to be effective July 1, 1975.

1/ "Old" UR refers to UR prior to the November 29, 1974, amendments to Medicare UR regulations (which went into effect July 1, 1975) and before the advent of PSRO review.

Study Objective 4: New UR Costs

Develop reliable estimates of the total in-hospital cost of acute care inpatient new UR in two non-PSRO areas (i.e., acute care inpatient UR completed under 1976 Medicare UR regulations). This estimate includes only costs incurred by the hospitals because no PSRO existed within these areas.

Study Objective 5: Cost Patterns

Assess the unit costs of each component activity of PSRO review, and identify hospital and UR program characteristics that are related to the observed cost of UR.

Study Objective 6: Costs Of Review In 12 Sample PSRO Areas

Develop reliable estimates of the total cost of acute care inpatient review in each of 12 PSRO areas (9 predominantly delegated and 3 predominantly nondelegated), including hospital and PSRO administrative costs related to acute care inpatient review.

Study Objective 7: Process Analysis

To the extent that sufficient process information can be gathered as a by-product of the cost study, contrast the various approaches used by PSROs and hospitals in conducting UR.

1.2 Definition Of UR Activities Costed

All estimates of PSRO UR cost include three components:

- PSRO operating costs
- Nondelegated review costs
- Delegated review costs

Further, all cost estimates exclude program implementation expenditures (i.e., start-up costs[1/]) because the prime study objective was to identify the expected

1/ Start-up costs were identified and will be discussed in this report. They are not included in operating cost projections.

cost of program operation for acute care inpatient review. For the same reason, any expenditures for ambulatory or long-term care review identified at sample PSROs and hospitals were also excluded from cost projections. Donated physician time was identified only at hospitals. Although both donated and paid physician time occur at hospitals and PSROs, the proportion of hospital review physician time paid is expected to rise (i.e., currently donated physician time will soon be paid) while no changes appeared imminent in payment of physicians for PSRO-wide activities. Thus, conversion of donated physician time to paid time is only expected to be a major cost factor for delegated review (discussed in more detail below).

Brief definitions of the three above-mentioned cost components follow:

- PSRO operating costs cover activities supporting acute care inpatient review that are expected to recur each year such as:
  - Management, monitoring and evaluation of delegated and nondelegated review
  - Ongoing criteria development and refinement
  - Data processing (primarily profile analysis)
  - Liaison with hospitals, physicians, and nonphysicians
  - General administrative activities
- Nondelegated review costs cover admissions and continued stay review as well as the completion of the PSRO patient data abstract when these functions are completed by the PSRO. (Technically speaking, nondelegated review could include all five activities included in delegated review; however, concurrent review and abstracting accounted for virtually all nondelegated review costs.)
- Delegated review costs cover five component activities completed by hospital personnel of which the first two account for approximately 80 percent of the cost of delegated review. The components are:

- Concurrent review including admissions and continued stay review

- Abstracting or the completion of the PSRO patient data abstract. In most hospitals abstracting was a function distinct from concurrent review, although in some the abstract was completed as an integral part of the review process.

- Medical care evaluation studies include only medical audits because current BQA policy provides funding only for this type. Medical audits identified generally followed (or were similar to) Joint Commission on Accreditation of Hospitals retrospective diagnosis specific study procedures. Because the federal liability for medical audits is limited to the amount of effort devoted to federal patients, audit costs proportional to the ratio of federal discharges to all discharges are used in study cost estimates.

- Utilization review committee activities were identified in almost every sample hospital and included policy setting for PSRO UR in the hospital, responses to PSRO correspondence, dealing with problem cases, etc. UR committee costs proportional to the ratio of federal patients reviewed to all patients reviewed are included in cost estimates.

- Direct administration, including activities such as completing required reports, training of UR personnel, and correspondence in support of the UR program also occurred in most sample hospitals. These activities, like the UR committee, were costed proportional to the ratio of federal patients reviewed to all patients reviewed.

In summary, the activities described above for PSRO operations, plus nondelegated review, plus the total of the five components of delegated review sum to the total cost of PSRO review.

PSRO start-up costs, as differentiated from operating costs, cover activities required to develop and implement the acute care inpatient review system; they are not expected to recur. Start-up activities were generally

easily distinguished from operating activities and included the development of policies and procedures for concurrent review, medical care evaluation studies, and abstracting and profile analysis; staff training; initial development of criteria manuals; and implementation of the system. New UR at sample hospitals generally looked similar to delegated PSRO review although it was not always as extensive. Old UR, likewise, has certain similarities to delegated review although it typically was much less structured and required much less effort. Old UR and new UR cost estimates include only hospital costs (analogous to the delegated component described above) because no PSRO activities existed.

1.3 Summary Of Major Findings

The information on which this report is based was developed through on-site data collection at hospitals and PSROs. Carefully constructed interview protocols were used to ensure comparability of information collected from each respondent. Data for 1976 and 1974 activities were collected at the following sites:

- 113 acute care, short-term nonfederal hospitals, including:
  - 90 hospitals completing delegated PSRO UR
  - 23 hospitals completing new UR under 1976 Medicare regulations in non-PSRO areas
- 12 PSROs, including:
  - 9 PSROs that used predominantly delegated review for hospitals in their areas
  - 3 PSROs that used predominantly nondelegated review for hospitals in their areas

When the results of the study are aggregated and extrapolated to estimate the national cost of PSRO UR, the results are as follows:

National Cost Of PSRO UR Based On 1976 Data Assuming Coverage Of:	Includes Paid Physicians		Includes Estimated Value Of Paid And Donated Physician Time[1/]	
	Cost Estimate	90 Percent Confidence Interval In Millions	Cost Estimate	90 Percent Confidence Interval In Millions
Federal Patients	$220,300,000	$196.1 - 244.5	$237,100,000	$213.4 - 260.8
Federal And Nonfederal Patients	$570,900,000	$508.1 - 633.7	$609,900,000	$542.8 - 677.0
Federal Patients Actually Reviewed	$ 66,100,000	$ 58.8 - 73.4	$ 70,300,000	$ 62.0 - 78.0

The above cost estimates and others for 1976 may underestimate expected future PSRO program costs because a number of sample PSRO delegated hospitals were adding staff to their review program in anticipation of direct funding, whereas none spoke of staff reductions.

The 90 percent confidence intervals shown above are calculated from the variability exhibited by the unit cost data on which the estimates are based. The intervals indicate how certain one may be that the estimated cost truly represents PSRO program costs. For example, the predicted cost of federal patient review is $220.3 million. Based on study figures, we are 90 percent certain that the true program cost lies within the interval $196.1 million to $244.5 million.

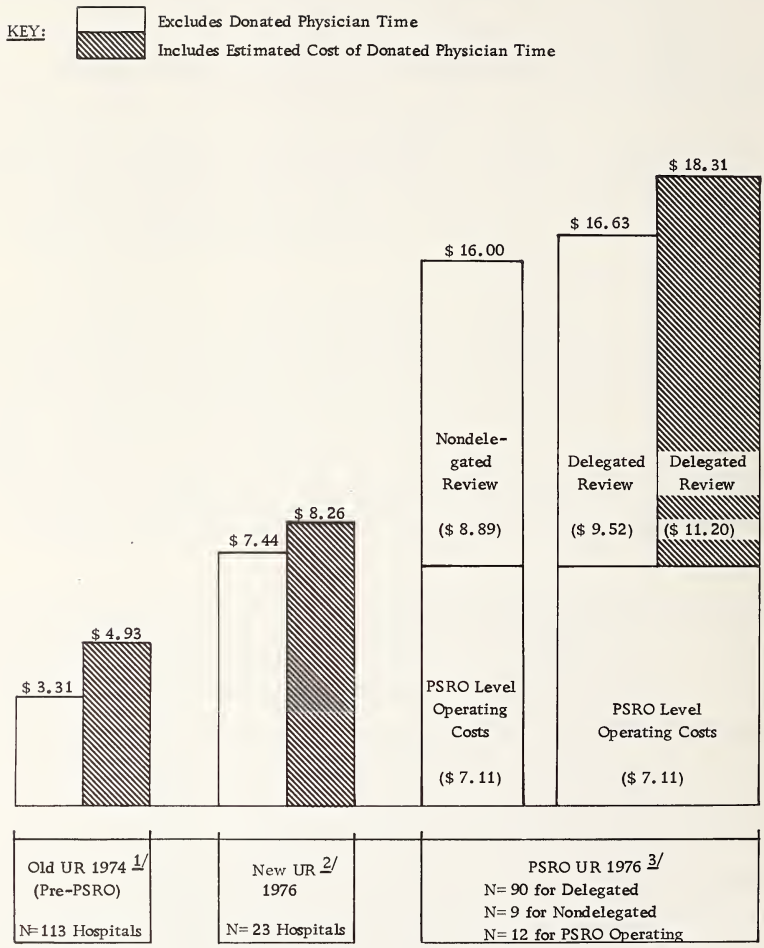
Data from sample hospitals collected for PSRO UR and new UR in 1976, and old UR in 1974, shown in Figure 1-I, following this page, illustrate graphically the very clear increase in the unit cost of UR per federal discharge from 1974 to 1976. Looking strictly at 1976, it is also apparent that the unit cost per discharge of PSRO UR excluding PSRO-level operating costs is significantly more expensive than the unit cost of new UR. When the full cost of PSRO review, including PSRO operating costs is considered, it is apparent that PSRO review is about twice as expensive as new UR. The cost differences for each program (old UR, new UR, and PSRO UR) occur because different types of activities were completed; however, it remains to be seen whether these differences are worth the additional cost.

1/ Where donated physician time is included, all physician time, whether formerly paid or donated, is costed at $25 per hour (the current national average hourly rate for physicians). In addition, federal reimbursement guidelines are applied, and it is assumed that approximately 90 percent of reimbursable donated time will eventually be claimed.

FIGURE 1-I

Office of Planning, Evaluation, and Legislation

UNIT COST OF OLD UR, NON-PSRO UR, AND PSRO UR



1/ $ 3.31 ± .66, $ 4.93 ± .82 (90 percent confidence intervals shown)
2/ $ 7.44 ± 1.80, $ 8.26 ± 1.94
3/ $ 8.89 ± 2.60, $ 7.11 ± 1.58, $ 9.46 ± .87, $ 11.18 ± .77

Further analysis of PSRO cost data and variation of assumptions about the expected structure of the fully implemented PSRO program resulted in only slight changes in the overall cost estimates. Because the PSRO program is not fully implemented, it was assumed in the above cost estimates that current UR activity requirements will be maintained and 25 percent of patients will be reviewed in nondelegated status when the acute care inpatient review program reaches the full operating level. Costs identified at each hospital were weighted equally with no adjustments. When the data are extrapolated to national cost estimates with different assumptions and different weighting strategies for unit costs the following estimates are obtained:

National Cost Of PSRO UR Under The Same Assumptions Except That:	Includes Paid Physicians		Includes Estimated Value Of Paid And Donated Physician Time	
	Cost Estimate	90 Percent Confidence Interval In Millions	Cost Estimate	90 Percent Confidence Interval In Millions
Delegated Review Costs Weighted By PSRO Area	$223,700,000	$199.1 - 248.3	$237,700,000	$213.9 - 261.5
Delegated Review Costs Weighted By Covered Inpatient Days	$226,200,000	$199.1 - 253.3	$241,000,000	$214.5 - 267.5
10 Percent Instead Of 25 Percent Are Reviewed In Nondelegated Status	$220,500,000	$196.2 - 244.8	$240,400,000	$216.4 - 264.4
CR Completed On A 20 Percent Selected Sample; All Other Activities Are The Same	$151,700,000	$130.5 - 172.9	$159,600,000	$137.3 - 181.9
Aberrant High Cost Hospitals Are Excluded From Data Base	$214,600,000	$191.0 - 238.2	$230,500,000	$207.5 - 253.6
PSRO UR Costs Before Limitations Of Federal Reimbursement Guidelines	$232,600,000	$139.6 - 255.9	$265,400,000	$238.8 - 286.0
Estimate Is Based On Relationship Of Total Hospital UR Cost To Bed Size (i.e., Unit Costing Not Used)	$225,500,000	N/A[1/]	N/A	N/A

1/ Variance and costs including donated physician time not calculated.

Each of these costs should be compared to the estimated $220.3 million we predicted the program will cost based on our preferred assumptions ($237.1 million, including donated physician time). Other national cost estimates of interest are as follows:

	Includes Paid Physicians		Includes Estimated Value Of Paid And Donated Physician Time	
	Cost Estimate	90 Percent Confidence Interval In Millions	Cost Estimate	90 Percent Confidence Interval In Millions
National Cost Of PSRO UR For All Federal And Nonfederal Patients Assuming Economies Of Scale	$438,800,000	N/A[1/]	$477,800,000	N/A[1/]
National Cost Of Old UR In 1974	$ 50,100,000	$39.6 - 60.6	$ 70,100,000	$58.2 - 82.0

Comparing the $438.8 million to $570.9 million that was estimated without economies of scale (see page 7), it appears that substantial unit cost savings can be expected if all patients are review. By comparing the old UR cost figure to the estimated cost of PSRO review in 1976 (also shown on page 7), it appears that an additional $170 million over old UR costs would have been required for full implementation of PSRO.

Other findings of interest include:

- The cost of new UR was found to be 33 percent lower than the cost of PSRO UR in identical hospitals when areas matched for demographic characteristics were considered (37 percent lower when the estimated value of donated physician time was included). When PSRO operating costs are included, new UR costs 63 percent less than PSRO UR and 62 percent less when donated physician time is included.

1/ The unit cost basis for one component of this estimate was developed judgmentally so confidence intervals cannot be provided.

- The unit cost of PSRO UR per federal discharge reviewed is not significantly related to hospital bed size, teaching status, level of services, occupancy rate, number of discharges covered by the program, per capita income in the hospital's county, and the number of referrals to review physicians or denials observed per 1,000 discharges reviewed.

- There is a modest negative correlation (i.e., $r = -.63$; $p = .00001$) between the unit cost of PSRO UR per federal discharge and the percent of total discharges in the hospital that are covered by the review program. This suggests that when nonfederal patients (in addition to federal patients) are reviewed, the unit cost of review decreases. A combination of economies of scale and the fact that nonfederal patients are cheaper to review probably accounts for the observed cost savings.

- The best predictor of the total cost of a hospital's PSRO UR program is the number of beds in the hospital ($r = .87$). The number of beds is a better predictor than the number of discharges, the number of discharges reviewed, the number of referrals and denials, or any other variable found.

- The unit costs identified at sample hospitals fall in a normal distribution. This is important because normality was assumed when sample sizes were selected for the study. In addition, this finding validates the appropriateness of parametric statistical analysis for study findings.

- For PSRO operating and start-up costs, a fixed plus variable cost structure was originally hypothesized. However, if such a structure exists, it was not demonstrated in this study by data from the 12 sample PSROs. The study data did indicate economies of scale achievable if all patients were reviewed amounting to $3.00 per discharge for PSRO operating costs, $2.00 per discharge for nondelegated review, and $4.00 per discharge for delegated review.

- The average unit costs observed in sample hospitals and PSROs were:

	Unit Cost	90 Percent Confidence Interval	Unit Cost	90 Percent Confidence Interval
PSRO Operations Per Federal Discharge	$ 7.11	± $ 1.58	--	--
PSRO Start-Up Per Federal Discharge [1]	$ 4.08	± $ 1.05	--	--
Nondelegated Review Per Discharge Reviewed	$ 8.89	± $ 2.60	--	--
Delegated Concurrent Review Per Federal Discharge	$ 6.12	± $ 0.58	$ 7.23	± $ 0.70
Delegated Abstracting Per Federal Discharge	$ 1.58	± $ 0.20	$ 1.58	+$ 0.20
Delegated Medical Audits Per Audit Completed	$ 505	± $ 80	$ 614	± $ 79
Delegated Utilization Review Committee Per Hospital Per Year	$1,206	± $237	$2,291	± $272
Delegated Direct Administration Per Hospital Per Year	$1,950	± $447	$1,973	± $423

Because the PSRO program was not implemented in all hospitals nationwide at the time of this study, a random sample from the universe of PSROs and hospitals could not be used. Although the final sample was selected to represent all hospitals and PSRO areas in the country based on the study team's best judgment, biases of unknown magnitude may exist. However, such biases should be minimal because sample areas compare favorably with the United States as a whole on several key variables, including:

[1] Only one PSRO indicated that start-up activities were complete for their acute care program, so additional start-up expenditures above current levels are expected. Further, distortions of unknown magnitude in the start-up costs occur because many PSROs benefited from EMCRO, medical foundation, and other local activity that occurred prior to the creation of their PSRO. It is not possible to assess accurately how much of this early developmental effort should be charged to PSRO. The figures developed, however, accurately reflect the additional cost required to move from the state of the art (when PSROs began) to their current status.

- Sample areas had less than one-tenth of one percent more inpatient days per 100,000 population than the nation and nine percent fewer physicians.

- The percent of population over 65 in sample areas was 14 percent less in sample areas than in the nation (i.e., 8.5 percent versus 9.9 percent).

- The per capita income in sample areas was only seven percent less than the level nationally.

Within the 11 study areas, a random stratified selection procedure was used to identify sample hospitals to ensure full representation of size categories and teaching and nonteaching institutions. Only one hospital contacted elected not to participate in the study. Because unit costs were not associated with any hospital variables, it is unlikely that biases were introduced in the data due to an unrepresentative selection of hospitals. In brief, although the actual cost data developed at PSROs and hospitals are accurate, the use of these data for national cost estimates is valid to the extent that study respondents represent the national universe of PSROs and hospitals. It appears that the sample selected is fairly representative.

In summary, the total operating cost of acute care inpatient PSRO UR, assuming nationwide PSRO program operation with coverage of all federal patients, is estimated to be $220.3 million ($237.1 million, including estimated charges for donated physician time). This figure lies very close to the $200 million figure developed by the Institute of Medicine in 1976 [1/], which did not reflect the constraints of federal reimbursement guidelines (which were developed later) and which excluded donated physician time. These figures include both PSRO operating costs and the cost of delegated and nondelegated review.

1/ Evaluation Study of Health Care Quality Assurance Programs, November, 1976. Completed under HEW contract number 282-75-0437 by the Institute of Medicine; Linda K. Demlo, Ph.D., Study Director.

The full cost of PSRO review as mandated by Public Law 92-603 will be much greater, however, than the estimates developed in this study since the study considered only inpatient UR and did not include the cost of ambulatory and long-term care review. The Institute of Medicine study suggests a lower bound estimate of $250 million for ambulatory review on federal beneficiaries, but no estimate was provided for long-term care. Thus, the total cost of PSRO review for all federal patients is expected to be $470 million plus the cost of long-term care review.

1.4 Description Of Content Of Each Chapter Of This Report

For further information on the topics summarized in this chapter, refer to the appropriate chapter(s) described below:

1.0 Introduction And Summary

2.0 Background On PSRO And The Need For This Study--Explains why available cost data were not adequate for the PSRO evaluation and describes the current management and financial structure of the PSRO program as it affected data acquisition for this study.

3.0 Methodology Employed--Describes interview guides used at the hospital and PSRO levels, the sampling strategy, interviewer training, and the methods used to extrapolate the data to national estimates.

4.0 Data Sources, Reliability, And Validity--Identifies the sources of study data, discusses data reliability and validity, analyzes possible interviewer bias for the hospital study, and compares sample PSROs to the universe of PSROs.

5.0 Findings: The National Cost Of PSRO And UR Activities--Presents and discusses overall cost projections at the PSRO and hospital levels as identified in the objectives in Section 1.1 above.

6.0 Findings: Analysis Of PSRO UR Costs And Comparisons Among Sample Areas--Explores variables associated with inpatient UR costs such as hospital size, area per capita income, how PSRO UR costs compare to non-PSRO UR and "old" UR, and possible implications of these costs.

7.0 Findings: Description Of Current UR Processes Observed At Sample Hospitals And PSROs--Describes the process of PSRO UR observed in sample hospitals and significant findings that were developed as a by-product of the cost study based on analysis of inpatient hospital UR activity flow charts and the definitions of cost categories developed at each PSRO.

8.0 Suggested Methodologies And Interest Areas For Future Cost Studies--Suggests possible areas of future interest and provides suggestions should any part of this study be replicated.

Appendices--Include full copies of the interview guides and a more detailed explanation of study methodology.

2.0 BACKGROUND ON PSRO AND THE NEED FOR THIS STUDY

2.0 BACKGROUND ON PSRO AND THE NEED FOR THIS STUDY

The Social Security Act Amendments of 1972 (P. L. 92-603) mandated the establishment of PSROs nationwide to assure that medical services provided to federal[1/] patients are medically necessary, meet recognized professional standards, and are provided in the most appropriate setting. The National Professional Standards Review Council is explicitly required by P. L. 92-603 to review PSRO program operations to determine their effectiveness and comparative performance.

In addition, the implications of PSRO are substantial, considering its impact on:

- Quality of care for the entire health system, especially with the prospect of National Health Insurance
- Expenditures for federal health care both for:
  - Services provided to federal beneficiaries
  - And, to a lesser extent, the direct cost of quality assurance activities (i.e., previous estimates for the operating cost of PSRO range from several hundred million to several billion for fully implemented systems)

As a result of the statutory requirements and the far-reaching nature of the program, the development of PSRO evaluation strategies was initiated almost at the inception of the program, culminating in the publication Program Evaluation Plan: Professional Standards Review Organizations.[2/] When OPEL

1/ "Federal" patients means all patients who receive medical services paid for by the Medicare, Medicaid, or Maternal and Child Health programs, Social Security Act Titles XVIII, XIX, and V, respectively.

2/ Program Evaluation Plan: PSRO, published September 22, 1975, by the Office of Professional Standards Review, Office of the Assistant Secretary for Health, HEW; coauthored by Martin Baum, Ph.D.; Peter McMenamin; and Melvin Rudov, Ph.D.

developed "PSRO: An Evaluation of Professional Standards Review Organizations," the overall PSRO evaluation strategy of which this cost study is a part, the Program Evaluation Plan was a basic input. This chapter explains how the need for a special PSRO cost study grew out of the evaluation plan and how the program structures for PSRO and non-PSRO review affected this study.

2.1 A PSRO Cost Assessment Study Was Required Because All Of The Cost Data Needed For The PSRO Evaluation Were Not Available From Other Sources

The basic evaluation strategy developed by OPEL required the assessment of inpatient PSRO program costs for comparison with program impacts in a limited cost/benefit analysis study.[1/] Existing sources of cost data were examined to determine their utility for this study as follows:

- PSRO Management Information System (PMIS) collects data on costs of nondelegated review and PSRO administration. No delegated review costs are, as yet, reported on PMIS, so this information was unavailable. Also, PMIS cost data for PSRO administrative activities do not differentiate start-up from operating costs, so use of these data would have inflated the expected operating costs of the program.

- PSRO contract records, held by the Bureau of Quality Assurance (BQA), were not useful. They provided no delegated hospital data and did not differentiate start-up from operating costs.

- Medicare cost reports for hospitals rarely include a separate cost center for UR because very few hospitals sought direct reimbursement of UR done under Medicare regulations. At the time of this study, many hospitals were considering the development of a PSRO UR cost center, but very few were in existence. In the future, the cost of both delegated and nondelegated UR will be explicitly recorded at all hospitals and PSROs where direct reimbursement from the Medicare Trust Funds is sought for review activities.

1/ Impacts are discussed in Volumes 7, 8, and 9 of PSRO: An Evaluation of Professional Standards Review Organizations.

- Evaluation Study of Health Care Quality Assurance Programs, [1] completed by the Institute of Medicine (IOM) in November, 1976, provides a national cost estimate of $200 million for PSRO, including hospital and PSRO administrative costs. This estimate was based on a group of hospitals selected because of their outstanding reputations for positive results due to their PSRO UR programs. A broader data base, more representative of the national situation, was needed for the PSRO evaluation. In addition, a concentration of sample hospitals in several specific sample areas was needed to provide sound cost estimates in each area so that case study cost/benefit analyses would be possible.

- Research Plan for the Evaluation of the Effectiveness of the UR Requirements of Medicare, [2] underway at the time of this project at Boston University (BU), was a broad process study that included several questions relating to the estimated cost of UR during the last few years. Data from the Boston University study were not available in time for use in the PSRO evaluation. In addition, although the study sample is likely to include enough hospitals under PSRO review to make national cost projections, not enough hospitals were found in any of OPEL's sample study areas to provide reasonable PSRO area cost estimates. (Almost 500 out of the 1,000 sample hospitals throughout the United States responded to the BU mail-out questionnaire. Because approximately 20 percent of hospitals were under PSRO review in 1976, the BU sample was expected to include about 100 such hospitals.) Further, UR budgets and cost centers were rarely available in hospitals to guide the UR chairperson (who answered the BU questionnaire) in developing estimates, and the UR chairpersons from hospital to hospital were known to have different perceptions as to what is countable as UR activity. Thus, the BU cost data were viewed as useful in providing order of magnitude cost estimates, which might help confirm other figures but that would not be precise enough for use in the PSRO evaluation.

1/ Evaluation Study of Health Care Quality Assurance Programs, November, 1976. Completed under HEW contract number 282-75-0437 by the Institute of Medicine; Linda K. Demlo, Ph.D., Study Director.

2/ Research Plan for the Evaluation of the Effectiveness of UR Requirements of Medicare, in progress under HEW, SSA contract number 600-75-0209 by Boston University; Paul M. Gertman, M.D., Project Director

- PSRO Cost Accumulation Study, [1] completed by Macro Systems Inc., in 1975, focused on only five eastern hospitals and did not provide suficient data to meet study objectives.

Thus, because usable cost data were not available from other sources, a cost assessment study was required to develop the data needed for the OPEL PSRO evaluation.

2.2 The Two-Level Structure Of PSRO Program Operations (With Review In Hospitals And Directive And Supportive Activities At The PSRO) Determined The Basic Strategy Required To Assess Overall Program Costs

Essential to the understanding of this cost study is a basic knowledge of how and where PSRO program costs are incurred. The PSRO law stipulates that local physician-sponsored PSROs be established across the country to be responsible for review activities in their areas. HEW designated 203 areas in the United States for the development of local PSROs and established review of inpatients in acute care hospitals as the top priority for program implementation. Thus, the "average" PSRO is responsible for review in more than 30 local hospitals (there are approximately 6,000 short-term, acute-care, non-federal hospitals in the United States covered by the PSRO program).

Actual PSRO activity, thus, occurs at two different locations: at the hospitals and at the PSRO offices. UR activity generally requires access to patient medical records, so it usually takes place at the hospital. This review involves the following activities:

- Concurrent review (CR) occurs while the patient is in the hospital. CR includes:
  - Admission review (AR) within 24 hours of a patient's entry into the hospital to determine the medical necessity of hospitalization

1/ PSRO Cost Accumulation Study, July, 1975. Completed under HEW, HSA contract number 105-74-6 by Macro Systems, Inc.; Frank W. Reilly, Project Director.

- Continued stay review (CSR), to be completed prior to the expiration of a length of stay (LOS) assigned when AR is completed. This review is intended to verify that hospitalization is still medically necessary

In some cases, hospitals have also developed quality assurance activities to be completed as part of CR.

- Medical care evaluation (MCE) studies generally occur retrospectively, i.e., after the patient has been discharged. MCEs usually involve the study of a sample of patient charts (selected based on a set of criteria) to see whether care that meets accepted professional standards has been delivered.

- Abstracting consists of the development of an abstract of data on each patient reviewed that is input to a statistical system at the PSRO. Abstracts are usually completed as a separate process from CR; however, in some areas, the abstract functions as a worksheet for CR and is, thus, completed as an integral part of patient review. The PSRO is responsible for providing data analysis for the purpose of identifying patterns of patient care among area hospitals, within each hospital, by physicians, etc.

PSROs may use two distinct administrative strategies with regard to the administration of review for inpatients at acute care hospitals:

- Delegated review occurs when the PSRO has delegated responsibility for completion of patient utilization review to the hospital. This impacts on the PSRO cost assessment because hospitals with delegated review assume the financial responsibility for paying review personnel and other associated costs. At the time of this study, some hospitals were beginning to seek direct reimbursement for delegated review from the Medicare Trust Fund. However, most hospitals absorbed review costs as an undifferentiated part of overhead. Thus, delegated review costs were not available at the PSRO, and they had to be developed at hospitals.

- Nondelegated review occurs when the PSRO exercises the option to complete patient UR in hospitals with PSRO staff. In this case, the PSRO assumes financial responsibility for paying staff salaries related to review activities. At the time of this study, some PSROs were in the initial steps

of seeking reimbursement for nondelegated review activities from the Medicare Trust Fund. However, none had completed negotiations, so the nondelegated review costs were negotiated as part of their regular PSRO contract with BQA.

The financial responsibility for review activities is significant to this study because, in effect, delegation status determined on whom the study needed to focus efforts. Acquisition of cost data for delegated review required sampling a number of delegated hospitals in the sample area, whereas the cost of nondelegated review for all nondelegated hospitals in a PSRO may be identified by reviewing PSRO accounting records.

Figure 2-I, following this page, illustrates that, in addition to delegated and nondelegated review, significant PSRO expenditures are made on "Areawide Review" and "Administrative and Nonacute Care" activities. These two expenses are incurred directly by the PSRO and can be accounted for by a review of PSRO financial records. The exact nature of the activities completed in each area illustrated on Figure 2-I is as follows:

- Areawide Review includes costs of management, monitoring, and data processing, as well as control of hospital review activities. Areawide review is reimbursable from Medicare Trust Funds, but, at the time of this study, PSROs had not yet made claims for them. These costs are part of the contracts negotiated by PSROs with BQA.

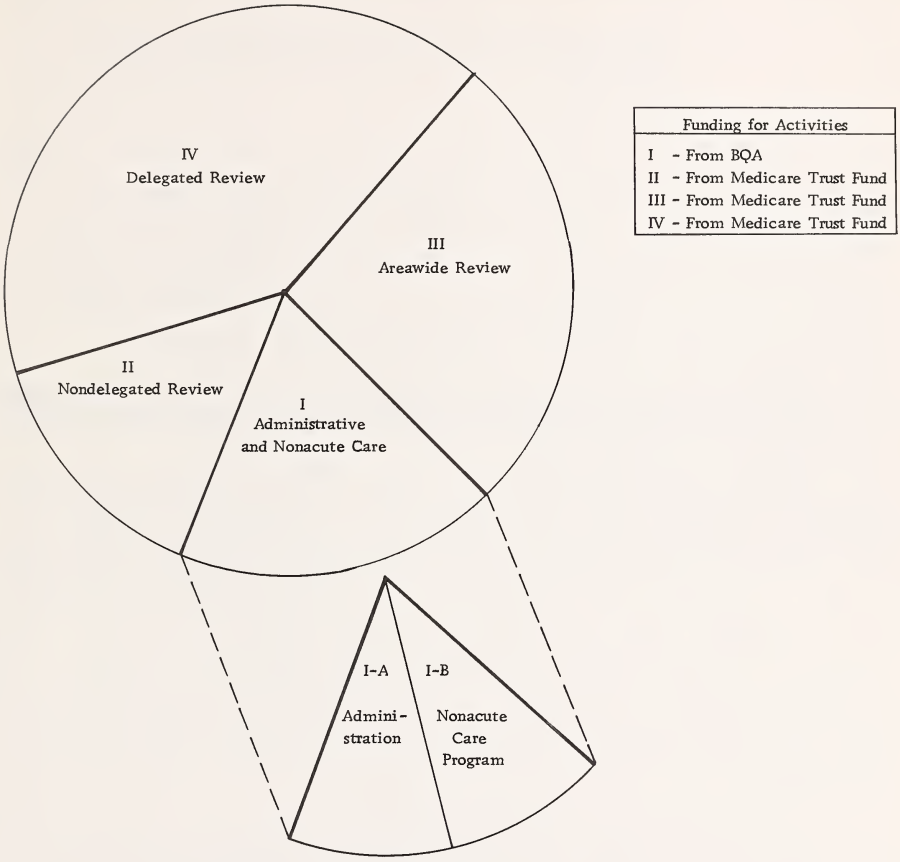
- Administrative costs are incurred for PSRO business activities related to PSRO review of inpatients at acute care facilities. These costs are expected to continue as part of the PSRO's contract with BQA.

- Nonacute care programs include all activities, whether administrative, program development, or patient review, directed at long-term or ambulatory care patients. These costs are part of the PSRO's contract with BQA. Nonacute care program costs were identified in this study to make sure they were not included in estimates of acute care UR costs.

FIGURE 2-I

Office of Planning, Evaluation, and Legislation

MAJOR PSRO ACTIVITIES AND THEIR FUNDING SOURCE*



Note: * This pie chart generally reflects the relationships of total reimbursable costs observed in this study. Where nonfederal patients were reviewed, the size of the pie increases but the proportions stay basically the same. Partially delegated hospital costs are included on an item basis, i.e., delegated MCE's at a partially delegated hospital are included in IV and nondelegated CR is included in II. The Roman numerals used correspond to those used in BQA's recent reimbursement transmittal, number 46.

- Nondelegated review occurs when the PSRO exercises the option to complete patient UR in hospitals with PSRO staff.

- Delegated review occurs when the PSRO has delegated responsibility for completion of patient utilization review to the hospital.

In summary, due to the structure of the PSRO program, costs for administration, areawide review, and nondelegated review were identified at sample PSROs whereas the cost of delegated review was assessed at delegated hospitals within the PSROs. Thus, all of the costs represented on the pie chart in Figure 2-I were identified; however, the cost of nonacute care programs will not be included in estimating UR program costs for acute care.

2.3 Costs For Current UR In Non-PSRO Areas And For The Old UR Program (FY 1974) Must Be Accessed At Individual Hospitals In The Same Manner As Delegated Review Costs

The prime focus of this study is on PSRO inpatient review at acute care facilities. However, the cost of current UR (i.e., for 1976) in hospitals in non-PSRO areas was developed because it represents a functioning alternative to PSRO. In addition, old UR expenditures were assessed for FY 1974 in all sample hospitals. Thus, the study provides some insight into the actual increase in UR costs from 1974 to 1976 in a sample PSRO and a sample non-PSRO hospitals. As a result, the difference in the incremental cost of PSRO UR and new UR (i.e., UR under the current Medicare regulations) can be identified.

For both old UR and current non-PSRO UR, there are no precise cost data available because very few hospitals kept them in a separate cost center. Although Medicare was willing to pay for UR in both cases, in practice, few hospitals ever made claims for direct reimbursement. This was a highly practical decision by hospitals because the Medicare Provider Reimbursement Manual requires that hospitals claiming direct reimbursement for UR for federal patients must perform the same review on all patients, even though

there is rarely a direct way to recoup the expenses of review for nonfederal patients. In addition, to make a claim for UR reimbursement, a separate cost center must be developed in the hospital accounting system. These complications led most hospitals simply to leave UR costs in general service cost centers and collect reimbursement for UR indirectly as overhead. Thus, a cost study similar in structure to the PSRO delegated hospital effort was required to gain cost data on UR under both old (pre-1974) and new Medicare regulations.

The actual activities completed in the UR programs under Medicare regulations were similar to PSRO utilization review in hospitals. For instance, compliance with Medicare UR regulations as they read prior to November 29, 1974, ranged from a simple UR committee that reviewed admissions, extended stays, and quality of care, retrospectively, to committee activity plus concurrent review using review coordinators. Current UR in non-PSRO areas generally involved committee activity and concurrent review that approached and sometimes exceeded the level of effort found in the typical hospital operating under PSRO UR requirements. Thus, costs for all three programs (i.e., old UR, new UR in non-PSRO areas, and PSRO in-hospital review) could be assessed using the same basic strategy.

3.0 METHODOLOGY EMPLOYED

3.0 METHODOLOGY EMPLOYED

This chapter presents the methodology employed to identify study respondents, develop UR cost centers, and access data on:

- Hospital inpatient utilization review costs to reconstruct a "cost center" for:
  - Delegated PSRO review in 1976
  - Utilization review under 1976 Medicare regulations for hospitals that are not in active PSRO areas (new UR)
  - Utilization review in 1974 (old UR) under then existing Medicare regulations for all hospitals in which 1976 PSRO or non-PSRO utilization review was assessed
- PSRO operational costs, from the time that the first contract was received to the present (generally 3 years), for:
  - Areawide review activities
  - Administration in support of acute care reviews
  - Nondelegated review
  - Nonacute care program costs

The study methodology was developed based on:

- The study goal of identifying the national costs of delegated and nondelegated PSRO UR for inpatients in acute care hospitals in 1976, including operating expenses at the PSRO level.
- Current PSRO program organization and the status of program implementation.

Ideal study methodology had to be reconciled with the fact that at the time of this study the PSRO program was not yet fully operational throughout the United States.

Briefly, the study methodology involved site visits to a sample of hospitals and PSROs to construct PSRO UR cost centers and to acquire the necessary basic data for preparing national and sample area cost estimates. Interview guides were developed for each situation, and a training program was used to ensure that uniform approaches were taken by all interviewers at each hospital and PSRO. Sites were selected in a two-stage sampling procedure, beginning with the selection of 12 PSROs that provided general geographic representation for the nation. The second stage was the stratified random selection of delegated hospitals within sample PSROs (based on hospital bed size and teaching status). Site visits, generally lasting two days, were made to each sample PSRO and each hospital. The data collected from PSROs and hospitals were aggregated to form the basis of cost estimates to meet project objectives. In Addition, because the PSRO program was not operational in all designated PSRO areas at the time of this study, assumptions as to how the program would develop were made to facilitate national cost estimates.

This chapter describes briefly the overall study methodology and details the methods and basic assumptions used to make the cost projections identified in Objective 1.1, in chapter 1.0 above. Copies of the interview guides and further details are provided in Appendices A, B, C, D, and E.

3.1 A Two-Stage Sampling Procedure Was Used To Identify Subjects: 12 PSROs Were Selected And Hospitals Were Selected Within The PSROs On A Random, Stratified Basis

The basic study objective was to develop data representative of the United States from which to make national cost estimates on a variety of assumptions regarding UR activities. Thus, PSROs were selected based on the premise that the prime question was to estimate what costs would be if all 203 PSRO areas had fully implemented, acute care inpatient review programs in all hospitals. A series of constraints on PSRO areas selected had to be applied, however, so random sampling in the universe of all PSRO areas could not be used.

The constraints on usable PSROs and their effects on site selection are illustrated graphically in Figure 3-I, following this page, and are described below:

- PSRO activity had to exist in sample areas studied. When the study was initiated, only 102 out of the 203 possible PSROs were active, and, of the 102, not all had enough activity to be useful for purposes of this study.

- Sample areas were required to have over 65 percent of their hospitals covered by active PSRO review programs. To assure that sufficient activity was occurring in sample areas to make generalizations about cost and impact, most hospitals in the sample areas were required to be involved in the review program. This constraint had to be imposed for the impact side of the overall PSRO evaluation to minimize possible benefit spill-over effects caused by physicians or patients avoiding hospitals with strict review programs and seeking those with less UR requirements. When this constraint was applied, 35 PSRO areas remained.

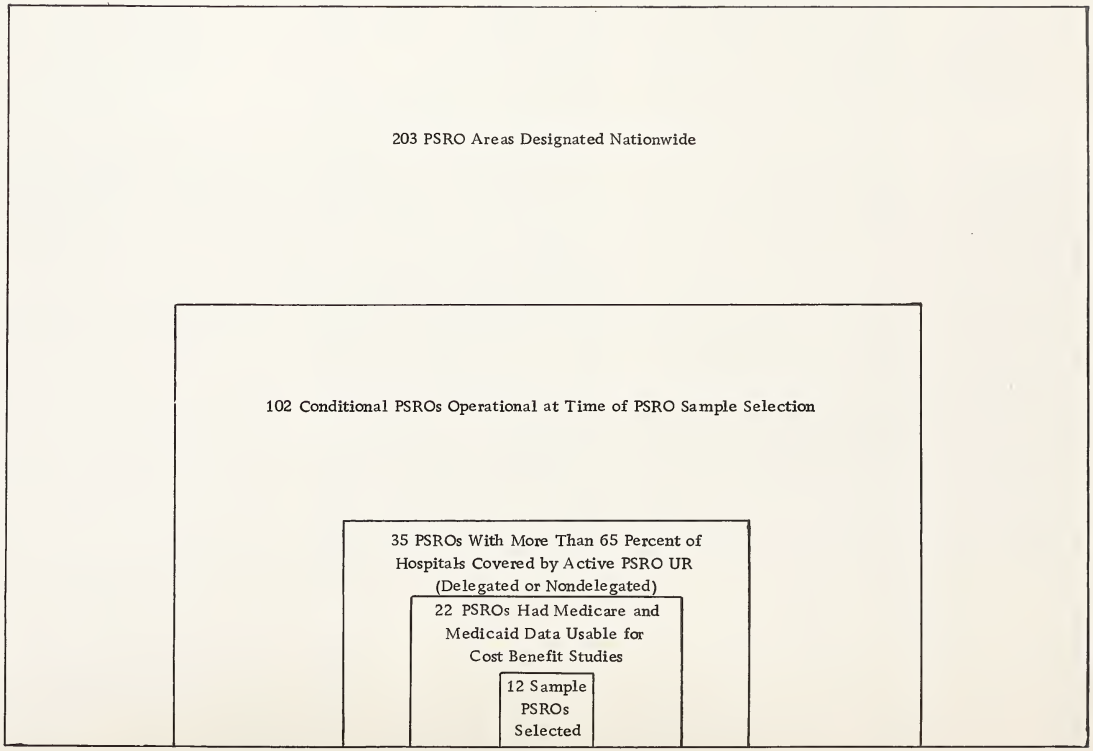
- Medicare and Medicaid data on utilization and rates of reimbursement had to be available in sample areas. The overall PSRO evaluation strategy calls for comparison of PSRO costs with changes in utilization and rates of reimbursement over time. Thus, only areas that had sufficient quality time series Medicare and Medicaid data to complete comparisons could be used by the overall study. Because Medicaid is a state-operated program and each state develops data systems to suit its own purposes, usable data broken down by PSRO area were often not available. The unavailability of these data in many potential sample areas eliminated those areas from use in the study.

When all constraints were applied, only 22 PSRO areas remained from which sample areas meeting study criteria could be sampled.

The final sample of PSROs chosen for inclusion in the study was determined by the trade-off between the increased cost of data acquisition at additional PSROs and the expected increase in the strength of statistical inferences that could be based on study data. Because some of the 22 possible study PSRO areas were in the same states and a geographic balance was desired in the sample, 12 PSRO areas were eventually selected and the remaining 10 were eliminated.

FIGURE 3-1

PSRO AREA SAMPLE SELECTION


203 PSRO Areas Designated Nationwide
102 Conditional PSROs Operational at Time of PSRO Sample Selection
35 PSROs With More Than 65 Percent of Hospitals Covered by Active PSRO UR (Delegated or Nondelegated)
22 PSROs Had Medicare and Medicaid Data Usable for Cost Benefit Studies
12 Sample PSROs Selected

Because PSROs tended to emphasize either delegated or nondelegated review and because differentiation between the cost experiences of organizations utilizing each strategy was desired, a minimal sample of predominantly delegated and of predominantly nondelegated PSROs was needed. Because predominantly nondelegated PSROs were much less common than predominantly delegated. a minimum group of three predominantly nondelegated was selected. The group of three nondelegated and the nine delegated PSROs was selected to provide the best possible geographical balance among the PSROs in their category.

Given the constraints that limited usable PSRO sites to 22 and the geographic imbalance of interest in PSRO (e.g., Western areas, although sparsely populated, showed greater interest and often entered the PSRO program earlier), the samples selected provided the best possible representation for all PSRO areas in the United States.[1/]

Hospital selection was completed within the predominantly delegated areas on a stratified random basis (no hospitals were visited in predominantly nondelegated areas because most review costs could be identified at the PSRO level). Strata for hospital selection for this study include:

- Teaching status, i.e., teaching versus nonteaching
- Hospital size as measured by the number of acute care beds, i.e., fewer than 200 beds versus 200 or more beds

In addition, because a small number of large hospitals generally account for the majority of beds in an area, larger hospitals were oversampled in relation to

1/ The PSRO areas selected and the total "eligibles" in each region were as follows:

HEW Region	# Eligible	# Selected	HEW Region	# Eligible	# Selected
I	0	0	VI	1	1
II	1	1	VII	0	0
III	5	1	VIII	4	1
IV	2	2	IX	4	2
V	5	4	X	0	0

In Region V, usable areas were in different states serving different types of populations. A comparison of sample area characteristics with those of all areas is made in Chapter 4 of this report.

their occurrence in the population. The teaching hospitals were sampled in proportion to their prevalence in each target area. In addition to study cost constraints, the overall sample size for each sample area was based on pretest data standard deviations, taking into consideration the precision and confidence levels desired by OPEL and the number of hospitals in the area (see Appendix A for a detailed explanation). The sample of hospitals in each study area ranged from 4 to 14, with a total of 90 delegated hospitals in all PSRO areas used in the study.

For comparison purposes, two areas where no PSRO activity had occurred were selected to be matched with similar areas with active PSROs. Within these two areas, new UR data were collected in a total of 23 hospitals selected with the same stratification procedures used for PSRO active areas.

In summary:

- Nine predominantly delegated PSROs were sampled, and data collected on a total of 90 delegated hospitals.
- Three predominantly nondelegated PSROs were sampled, with no associated hospital visits.
- Two non-PSRO areas were sampled where new UR under 1976 Medicare regulations was assessed in a total of 23 hospitals.

Thus, data were collected in a total of 12 PSRO and 2 non-PSRO areas and in 113 hospitals.

3.2 Interview Guides Were Developed For Hospital And PSRO Data Acquisition To Assure That A Uniform, Efficient Approach Was Taken With Each Respondent

A team of interviewers, who went individually to hospitals and in pairs to PSROs, was used to complete data acquisition. As a result of the potential for error implicit in using a large staff, very specific interview guides were developed and comprehensive training sessions were required for the interviewers to assure that a uniform approach was taken to data acquisition at each site. Three interview guides were developed:

- Interview Guide for the Hospital-Level Cost Study (OMB clearance was completed on this guide due to the large sample size. The OMB clearance number is 68-S-77015.)

- Interview Guide for PSRO-Level Expenditure Allocation in Predominantly Nondelegated Areas

- Interview Guide for PSRO-Level Expenditure Allocation in Predominantly Delegated Areas

The hospital guide provides detailed instructions for data acquisition beginning with preliminary contact of the hospitals by the PSRO, followed by initial contact by the Macro team, data collection, and the final letter of appreciation to the hospital, which ended study contact. Basic background narrative was included in the guide to instruct the interviewers on both the interview process and possible areas of sensitivity of hospital personnel. Following the background narrative, specific questions and instructions provide a flexible work plan for the acquisition and documentation of all required information in the minimum amount of time. Effective use of the interview guide, thus, saved time for both hospital staff and the interviewer. (See Appendix A for a more detailed discussion of methodology and Appendix B for a copy of the hospital guide.) In addition, the interview guide provided hard copy for the hospital officials to review so that they could better understand the study, in addition, the guide provides full documentation in case the study is replicated in the future.

The PSRO-level guides were developed to address the two different situations found at predominantly delegated and predominantly nondelegated PSROs. (A more detailed methodological discussion may be found in Appendix C, and the two interview guides are presented in Appendices D and E.) In both cases, the basic purpose of the interview guides was the same. Use of the guides assured a uniform approach to data acquisition at each type of PSRO and maximum comparability of data among PSROs.

Like the hospital guide, the PSRO-level guides provided detailed instruction for all interactions between study personnel and the PSRO, from the initiation of contact by OPEL through on-site data collection and the final letter of appreciation that ended project contact with the PSRO. Following the background sections in the interview guide, specific questions and instructions provided a structured work plan approach to data acquisition and documentation so that all required information could be gathered in minimal time. Just as for the hospital guide, the PSRO-level guides provided hard copy for the PSRO officials to review to understand the study better and to provide full documentation should this part of the study be replicated in the future.

The major areas where the predominantly delegated and predominantly nondelegated guides differed are in instructions for the contact of hospitals in the predominantly delegated guide and in the detailed instructions for flowcharting the hospital review process in the nondelegated guide.

All three interview guides were field tested before finalization and use in the study. Interviewers were trained as described below.

3.3 Interviewers Were Carefully Trained Before Data Acquisition Began For Both The Hospital And The PSRO Phases Of This Study

Because hospital data and PSRO data were collected by two separate teams, training was tailored specifically to interviewer needs in each situation.

Interviewers used for hospital data collection attended a three-day training workshop, followed by six days of supervised, on-site training in hospitals. The emphasis of the training was on use of the interview guide and developing an understanding of the issues and problems encountered in hospital data collection. Special role-play sessions were included to make sure that interviewers could effectively flowchart utilization review activities because flowcharting was fundamental to the identification of all UR cost components as well as the differentiation of component activities (e.g., differentiating admissions review from continued stay review for costing

purposes is difficult without a flowchart defining exactly what happens in each of these activities). In the three-day workshop, all aspects of the interview guide were covered at least twice.

Following the workshop, staff training continued under close supervision for six days on actual hospital visits. For the first four days (each hospital was completed in two days), two trainees accompanied an experienced interviewer to observe and then to perform, under supervision, all interview tasks. At the third hospital (i.e., the fifth and sixth days of training), interviewers completed hospitals in pairs, with supervisors being available to answer questions and correct any problems. Further, after each interviewer had completed two hospitals solo, another one-day, full-group training workshop was held to clarify areas of ambiguity and to reinforce effective interview techniques. Because data collection proceeded smoothly, no further training was required for the rest of hospital data collection. However, interviewers completed hospital data acquisition under close supervision involving telephone contact with the project field manager on a daily and then every other day basis.

PSRO-level operational expenditures were developed by four experienced staff members with extensive knowledge of PSROs and accounting. Training for these individuals involved two half-day workshops emphasizing use of the interview guide and understanding of the issues and problems encountered in actual PSRO data collection. Following these sessions, each analyst collecting PSRO-level data was further trained by completing two PSRO site visits before conducting data collection without supervision of the project manager. As with the hospital data collection effort, once training was complete, supervision continued via telephone when questions occurred on site and through the review of interview guides as they were completed.

3.4 Data Aggregation And Cost Projection Methods Were Based On Assumptions About How The PSRO Program Is Expected To Develop Nationally

As previously indicated, the study design provided specific data from each sample hospital for the following UR component activities:

- Admissions review (AR)
- Continued stay review (CSR)

} Concurrent Review (CR)

- Medical care evaluations (MCE's), including:
  - Medical audits
  - Nurse audits
  - Other audits
- Abstracting of patient data
- UR committee activities
- Direct administration (UR activities not related specifically to any of the above)

Unit costs were identified for each of these activities so that cost projections could be developed using a variety of assumptions about the mix of activities in the program (e.g., costs can be projected for a program using a 20 percent sampling strategy for CR, etc). Cost data from the PSRO provide a breakdown between:

- Start-Up Costs--Initial, nonrecurring costs of establishing review, such as finding and furnishing space, planning and testing programs, developing standards and criteria, implementing programs, acquiring data services, etc.
- Operating Costs--Recurring costs of PSRO operation, such as review program management and monitoring, space, data processing, criteria review and refinement, etc.

In addition, the PSRO-level cost data were broken down into twenty-nine line items (see Table 3-II, following this page) so that they could be aggregated to include only costs related to acute inpatient review administration, areawide

TABLE 3-II

SUMMARY OF PSRO EXPENDITURES BY ACTIVITY CATEGORY
(Costs in Thousands)

Activity Category		Number of Months of Data: Start-Up Costs	Operating Costs
1. Develop System for CR & MCE Review In Acute Care Hospitals			
2. Professional Relations, Initial:	a. Physicians		
	b. Hospitals		
	c. Non-physician professionals		
3. Professional Relations, Continuing:	a. Physicians		
	b. Hospitals		
	c. Non-physician professionals		
4. Initial Assessment and Baseline Data			
5. Develop Norms, Standards, & Criteria (cut off at manual pub.)			
6. MOU Development			
7. Administration, Initial:	a. Salary		
	b. Non-personnel		
8. Administration, General:	a. Salary		
	b. Non-personnel		
	c. Space		
9. Plan and Let Data Contract			
10. Data Processing			
11. Refine PSRO Review Plan and Complete Pilot Testing			
12. Implement CR Plans:	a. Training		
	b. Hospital assistance		
13. Implement MCE Plans:	a. Training		
	b. Hospital assistance		
14. Ongoing Criteria Development			
15. Manage, Monitor, & Evaluate Delegated & Nondelegated Review			
16. Areawide MCE's			
17. Non- and Partially-Delegated Review			
18. LTC Review			
19. Ambulatory Care Review			
Total Start-Up or Operating Costs			
Total Costs by Fiscal Year			
Start-Up Costs as a Percent of Total Costs			

20. Activities Focused on Nonfederal Patients	

review, nondelegated review, etc. As a result, estimates of PSRO-level costs could be made using a variety of assumptions as to the emphasis each PSRO places on each activity or grouping of activities.

The flexibility for data aggregation built into the study methodology is of particular importance because many assumptions must be made as to how the PSRO program will develop nationally to make any national cost estimate. For example, meeting the first study objective (restated below from Chapter 1) requires a number of assumptions, each of which must be known before the meaning of the estimate can be understood.

Objective 1--National Cost Of Acute Care Review For Federal Patients

Estimate the operating cost of acute care inpatient PSRO UR, assuming nationwide program operation with coverage of all federal patients. This cost excludes implementation and associated start-up costs and includes:

- PSRO-level operation costs (i.e., all expenditures for acute care review program operation)
- Delegated review in-hospital activities
- Nondelegated review in-hospital activities

In addition, the extent of use of donated physician time should be identified because much currently donated time is expected to be reimbursed in the future.

However, before these assumptions on PSRO program development nationally can be considered, the basic cost estimation strategy needs to be described. As explained in Chapter 2.2, the two-level structure of the program with delegated and nondelegated review results in costs being incurred in three distinct segments. Table 3-III, following this page, illustrates how these costs add up to the total cost of acute care inpatient review. These three costs are calculated as follows:

- PSRO-level operating costs are based on the number of patients covered by review program operations times the estimated unit cost of operational activity.

- Nondelegated review costs are based on the number of patients covered by nondelegated review times the unit cost per discharge reviewed.

TABLE 3-III

SIMPLIFIED COST BUILD-UP FOR THE
TOTAL NATIONAL COST OF PSRO REVIEW
INCLUDING HOSPITAL AND PSRO COSTS

I & III*	PSRO Level Operating Costs** For All PSROs
II	Non-Delegated Review Costs For All Inpatients In Non-Delegated Hospitals
IV	Delegated Review Costs For All Inpatients In Delegated Hospitals
[(I + III) + II + IV]	Total PSRO Acute Care Inpatient Review Costs

* Roman numerals correspond to the BQA budget category designations.

** Includes only acute care inpatient operating costs; non-acute and ambulatory care and start-up costs are excluded.

- Delegated review costs are based on a five-level cost estimation strategy that accounts for the exact amount of review activity expected and the observed unit cost for:

  - Concurrent review
  - Medical audits
  - Abstracting
  - UR committee activities
  - Direct PSRO review administration

  Table 3-IV, following this page, illustrates how the estimated cost of acute-care, inpatient delegated review was built up.

From this understanding of the basic cost estimation strategy, it is apparent that two assumptions must be made for each component of the total cost estimate:

- First, each unit cost must be identified. This includes developing a weighting strategy for determining the best possible estimate of the unit cost of each component of review activity

- An estimation strategy for determining the expected number of UR activity units that will be conducted must be identified

Table 3-V, following Table 3-IV, summarizes the assumptions required to make PSRO cost estimates, assuming national implementation. The key elements identified by this table include:

- Costs were based on BQA reimbursement guidelines and activities commonly included in hospital Memoranda of Understanding (MOU). Thus, expenditures for nonfederal patients were not included and costs of activities such as nurse and other nonphysician MCE's and for more than the required number of MCE's were excluded. Also, where donated physician time was costed, BQA maximums for physician time allowable for cost reimbursement were used.

- Unit costs were all unweighted. The impact of alternative weighting strategies is discussed in Chapter 5.0 of this report.

- Twenty-five percent of all federal patients were assumed to be covered by nondelegated review and 75 percent by delegated review under the full national implementation scenario.

TABLE 3-IV

COST BUILD-UP FOR ESTIMATING THE TOTAL NATIONAL
COST OF ACUTE CARE INPATIENT DELEGATED REVIEW

Unit Cost Of:	X	Estimated Number Of:	=	Estimated Total Cost Of:
(Concurrent Review)	X	(Discharges Reviewed)	=	(Concurrent Review)
(Medical Audits)	X	(Medical Audits Required)	=	(Medical Audits)
(Abstracting)	X	(Discharges Reviewed)	=	(Abstracting)
(UR Committee)	X	(Delegated Hospitals)	=	(UR Committee)
(Direct Administration)	X	(Delegated Hospitals)	=	(Direct Administration)
TOTAL COST OF ACUTE CARE INPATIENT DELEGATED REVIEW				Sum Of All Acute Care Inpatient Review Activities

TABLE 3-V(1)

ASSUMPTIONS USED TO ESTIMATE THE TOTAL COST OF PSRO REVIEW
BASED ON REIMBURSEMENT GUIDELINES ASSUMING NATIONWIDE PROGRAM
IMPLEMENTATION INCLUDING HOSPITAL AND PSRO LEVEL COSTS

Major Component Of Cost	Cost Estimate Excluding Donated Physician Time			Cost Estimate Assuming Payment For Currently Donated Physician Time Which Is Expected To Be Claimed		
	(1) (Unit Cost) X	(2) (Number Of Units) =	(3) Total Cost	(4) (Unit Cost)	(5) X (Number Of Units) =	(6)
PSRO Level Operating Cost	Unit cost per discharge is based on the average operating costs observed at the 12 sample PSRO's in the most current year. Current year data is used because it shows the most stable operating characteristics. All start-up and nonacute care costs are excluded from this unit.	Based on the best available projections of the total number of federal discharges from inpatient care at short-term, acute-care, nonfederal hospitals.	Total PSRO level operating cost.	Unit cost does not change from column (1). In most PSRO's there is already a mix of paid and donated physician time. Since current practices are expected to continue, this cost does not change.	Same as column (2).	Same as column (3).
Nondelegated Review Costs	Unit cost per discharge is based on the average cost experience in the nine sample PSRO's that do nondelegated review. Sample PSRO's, whether predominantly delegated or predominantly nondelegated, appear to have about the same cost experiences for nondelegated review. MCE costs are included in the delegated review cost line because they are generally delegated.	Approximately 25 percent of federal discharges are expected to be covered by nondelegated review in the foreseeable future.	Total cost of nondelegated review.	Unit cost does not change from column (1). In most PSRO's, little donated physician time was reported for the nondelegated physician advisor function. UR committee activity is completed at the PSRO level. Thus, no additional costs are foreseen for physicians.	Same as column (2).	Same as column (3).
Delegated Review Costs	Unit costs for activities below are based on BQA policy and suggestions as to how direct costs might be reimbursed when they are required by hospital MOU's, but not addressed specifically in reimbursement guidelines. Each component is based on the cost identified at 90 sample delegated PSRO hospitals.			Substantial donated physician time was observed for many component activities at delegated hospitals. The unit cost is adjusted to account for the total amount of physician time expected to be claimed. Thus, all physician time, whether actually paid or donated, is costed assuming that 90 percent of claimable hours (see restrictions in column (1)) will be paid at $25 per hour. The $25 per hour rate approximates the current national average physician salary.	Same as column (2).	Total Cost Of Delegated Review Including Estimated Charges For Formerly Donated Time.
	CR unit cost per discharge is based on actual costs observed, including paid physician time at cost up to $35 per hour.	CR units include 75 percent of the total federal discharges. The remaining 25 percent are covered under nondelegated review.	Total cost of concurrent review.			

TABLE 3-V(2)

Major Component Of Cost	Cost Estimate Excluding Donated Physician Time			Cost Estimate Assuming Payment For Currently Donated Physician Time Which Is Expected To Be Claimed		
	(1) (Unit Cost) X	(2) (Number Of Units) =	(3) Total Cost	(4) (Unit Cost) X	(5) (Number Of Units) =	(6)
Delegated Review Costs (Continued)	MCE unit costs are based only on medical audit activities since other types of audits are not reimbursable. Nonphysician costs are included in proportion to the incidence of federal patients in hospital discharges (i.e., total MCE costs times the proportion of federal to all hospital discharges equals the reimbursable cost). Paid physician time is allowable up to six hours (on the average) of leadership time per MCE; it cannot be reimbursed in excess of $35 per hour; and it is reimbursed in proportion to the incidence of federal patients in hospital discharges. The above is further limited to payment for the minimum number of MCE's required by BQA, as follows: . Four for hospitals with less than 10,000 discharges . Eight for hospitals with 10,000 to 20,000 discharges . Twelve for hospitals with more than 20,000 discharges	MCE units based on the total of the following: . Number of hospitals with less than 10,000 discharges times four . Number of hospitals with 10,000 to 20,000 discharges times eight . Number of hospitals with more than 20,000 discharges times twelve	Total cost of MCE's.			
	Abstracting unit costs are based on the number of discharges reviewed since all patients reviewed are abstracted. Unit includes the full cost of doing the abstract for federal patients regardless of whether the data is used or required for non PSRO purposes.	Abstracting units are same as for CR.	Total cost of abstracting.			
	UR committee unit cost per meeting includes all nonphysician preparation costs paid in proportion to the number of federal patients reviewed to all patients reviewed. Paid physician time is allowable up to six hours (on the average) for leadership time for each meeting; it cannot be reimbursed in excess of $35 per hour; and it is reimbursed in proportion to the number of federal patients reviewed to all patients reviewed.	UR committees generally meet monthly. Total units used are equal to 12 times the total number of delegated hospitals.	Total cost of UR Committee.			

TABLE 3-V(3)

Major Component Of Cost	Cost Estimate Excluding Donated Physician Time			Cost Estimate Assuming Payment For Currently Donated Physician Time Which Is Expected To Be Claimed		
	(1) (Unit Cost) X	(2) (Number Of Units) =	(3) Total Cost	(4) (Unit Cost)	(5) X (Number Of Units)	(6) =
Delegated Review Costs (Continued)	Direct administration unit cost per hospital includes all paid personnel times, the proportion of federal patients reviewed to all patients reviewed.	Direct administration units used are equal to the total number of nondelegated hospitals.	Total cost of direct administration.			
Total Cost Of PSRO Review			Sum of all of the above.			

The projection of national costs to meet other objectives can be achieved simply by making adjustments to these assumptions. For instance, Objective 2 can be met by adjusting the assumption as to the number of patients covered to the total of all inpatients, federal and nonfederal, and making adjustments in the unit cost figures due to any economies identified. (Economies may occur due to larger scale operations or because nonfederal patients may be cheaper to review; thus, when federal and nonfederal patient UR costs are mixed, the overall unit cost is expected to be less than the unit costs for just federals.)

The original study methodology called for the development of indirect (i.e., hospital overhead) costs for delegated review activities. Hospital interviewers reviewed each hospital's Form SSA-2552, the Annual Medicare/Medicaid Statistical Reimbursement Report, and developed an estimate of indirect costs based on a uniform methodology (see the hospital interview guide pages III-5 and III-6 in Appendix B for details). The indirect cost figures developed were not utilized in final project cost estimates for three reasons:

- The definitions used by hospitals for each cost center on the Form SSA-2552, the Annual Reimbursement Report, varied so substantially from hospital to hospital and area to area that it became apparent that all hospitals do not use the same definitions for each category. Indirect cost figures varied from 17 to 159 percent of direct costs (the average was 71 percent). It was apparent from scrutinizing hospital forms that the "indirect rate" identified was probably a better measure of the accounting effort employed by the hospital to put expenditures into directly reimbursable cost centers than it is a real measure of overhead costs.

- The indirect costs of delegated review will not be reimbursed directly. Based on BQA Transmittal 46, indirect costs of delegated review cannot be claimed for direct payment. These costs will be recovered indirectly through regular hospital overhead.

* * * *

Estimation of the cost of old UR under old Medicare regulations in 1974 was based on simpler assumptions because the program functioned in a very different way than PSRO UR or new UR (i.e., under 1976 Medicare regulations). Under old UR, the typical hospital had a UR committee that reviewed a sample (e.g., 10 per month) of closed federal cases (i.e., patients who had been discharged and whose medical records were closed and filed) on a retrospective basis and all long stays (e.g., over 48 or 60 days) on a concurrent basis. The extent of effort in UR committees varied widely. In addition, in some hospitals, retrospective review was also completed on all patients, and some also completed medical audits and abstracting. In a few hospitals, 1974 UR activity was similar to current PSRO UR. However, generally speaking, as described above, old UR was not provided on a patient focus, so costs did not vary based on the number of patients "covered." The total gross old UR program cost per hospital, the unit cost per federal patient covered, and the unit cost per hospital bed varied widely among sample hospitals.

As a consequence, two bases were used for estimation of 1974 UR cost: the gross cost per hospital and the average cost per bed. Although the variance on the per bed estimate is smaller, both estimates should be viewed as "ball park" figures for total program costs. The unit cost figures were extrapolated to national costs by multiplying by the total number of hospitals and total number of beds in the United States (based on Master Facility Index figures for 1975).

Cost estimation methods used to project costs for the 12 PSRO and 2 non-PSRO areas were very similar to those used for the national projections. However, for the most part, the units of activity were known exactly, e.g., the number of patients reviewed the number of hospitals, etc.; and the full cost of nondelegated review and PSRO operating costs were available from the PSRO-level cost analysis. Thus, the only assumption necessary regarded the weighting of the unit costs observed to reflect the anticipated number of units

that were performed in the area. In all cases, an unweighted mean of all hospital observations was used because no better weighting strategy could be identified in the sample hospital data.

4.0 DATA SOURCES, RELIABILITY, AND VALIDITY

4.0 DATA SOURCES, RELIABILITY, AND VALIDITY

All cost data used in this study for estimates and for other analyses are based on primary data collected from sample hospitals and PSROs. Most of the activity data used to estimate national costs are from secondary sources. This chapter identifies the sources for each type of data and the efforts taken to minimize reliability and validity problems. The discussion is presented in five sections.

- Hospital data, including reliability and validity of data sources
- Check for interviewer bias in the hospital study
- PSRO data, including both cost of PSRO operation and the cost of PSRO nondelegated review
- National data on numbers of federal discharges and hospitals by size category used to make national cost projections
- Comparison of sample PSRO areas to all PSRO areas on selected demographic variables

4.1 Hospital Data Were Acquired From Hospital Records, Where Possible, And From The Hospital Staff Most Knowledgeable About UR Program Activity

For each data item needed to construct a full UR cost center in sample hospitals, the best possible source was always sought. The typical path taken to acquire hospital information was to ask the hospital administrators basic questions about hospital characteristics and have them identify the best staff persons to answer the more detailed questions about operational activities and how much time each activity took. In the course of a hospital visit, all data were initially collected from one source and then confirmed by use of

another knowledgeable source. Any conflicting answers were reconciled before the interviewer left the hospital.

Generally speaking, the "best possible sources" for each type of data tended to occupy similar positions as identified below:

- Identification of all personnel and nonpersonnel cost components of the UR program was initiated in discussions with the hospital administrator. Cost components identified by administrators were generally confirmed and new ones were found when project team members flowcharted UR review activities on a step-by-step basis with hospital staff involved at the operational level of the UR program. Flowcharting each activity in the review program in each hospital prevented omission of any cost elements and eliminated costs that were not part of true UR activities.

- Allocation of personnel time to specific UR program activities was accomplished by working with all individuals involved in the review program to develop their best estimate of how they used their time. Because of the great sensitivity of these data, interviewers put considerable effort into making sure that time estimates were as accurate as possible. This involved asking UR program staff for the same figures several times, each time from a different perspective, culminating in asking if they were reasonably satisfied with the final figures developed by project staff. After all staff in the UR program allocated their time, the credibility of all figures was checked by asking supervisors or other personnel familiar with the program whether the data appeared correct. Using this highly personal approach and a careful definition of activities through flowcharting, validity problems were substantially avoided.

  The reliability of the data is somewhat less certain. Completion of a restudy at sample hospitals was not feasible both from a financial and from a practical standpoint (hospital personnel would be unlikely to volunteer to go through the same process again). As a result, a restudy of the hospitals to compare the similarity of time allocations arrived at with two separate interviews was not undertaken. However, the study team members believe that the reliability of the time allocations associated with concurrent review and abstracting (i.e., development of patient abstracts for the PSRO) is very

high. These components were relatively discrete and easily identifiable, whereas the other activity components were more difficult because they involved small portions of a wide variety of personnel. Because concurrent review and abstracting comprise approximately 80 percent of UR program costs, it is apparent that data reliability is substantial in the largest component of the overall cost estimates.

The greatest problems associated with the development of time allocations occurred when key UR program personnel were not available. Where their whereabouts were known by hospital staff, such personnel were pursued by long-distance telephone. If no contact could be made, supervisory or back-up personnel time estimates were used.

- Acquisition of salary data and fringe costs for all UR personnel was generally a straightforward operation with the accounting department of the hospital. A list of personnel identified by project interviews as involved in the hospital's UR activities was provided to the hospital accounting department, which then provided annual salaries. Fringe benefit costs were based on hospital budget percentage figures provided by hospital personnel. In several cases, salary information was extremely sensitive, so considerable discussion and sometimes correspondence were required before its release was accomplished. In all cases, however, salary data were developed from accounting records, so the reliability and validity of these data are very high.

- Hospital and UR review program characteristics were acquired from the hospital administrator and the person in charge of the UR program. Because the facts on hospital and program characteristics are well known to top hospital personnel, the reliability and validity of these data are also very high.

- Data on the number of activities completed were acquired as follows:

  - The Annual Statistical Reimbursement Report, Form SSA-2252 (or 2570 for some hospitals), provided data on:

    .. Hospital admissions and discharges, including federal and nonfederal patients

.. Number of patient days by payor category

.. Number of outpatient visits

In certain cases, the SSA-2552 (or 2570) form did not identify all data required, so figures provided by the medical records department were utilized.

- From UR records, the following were identified:

.. The number of admission reviews
.. The number of continued stay reviews
.. The number of medical care evaluation studies
.. The number of UR committee meetings

In certain cases, the needed UR statistics were not kept. Where possible, interviewers did hand-counts of UR work sheets, or UR committee notes were used to identify missing data. Where no records amenable to such counting were kept, a careful estimation strategy was employed to develop the "best possible" number (this was necessary most frequently in developing number of continued stay reviews).

Taking all of the activity data as a whole, their validity and reliability are considered to be reasonably high.

4.2 Analysis Of Possible Interviewer Bias On Hospital Data

Twelve interviewers were used during the course of the project to acquire data from the 113 hospitals visited. Because a multiplicity of on-the-spot decisions needed to be made during hospital interviews, it was of great importance that all interviewers used the same decision rules. The interview guides and extensive interviewer training addressed this problem. However, the final hospital cost figures were analyzed to determine the inter-interviewer reliability of the data.

After analyzing the data, we concluded that interviewer bias was not a problem. The focus of the check for bias was to identify any consistent patterns in the costs identified by specific interviewers. Table 4-I, following this page, shows the means, medians, and 95 percent confidence interval on the

TABLE 4-I

INTERVIEWER ESTIMATES AND BIAS

Interviewer Number 2/	Mean	Median	Range 1/ Lower Bound	Upper Bound
1	$ 9.86	$ 9.48	$ 3.92	$14.97
2	11.61	13.04	10.19	13.99
3	12.18	13.01	6.31	17.50
6	12.48	9.96	5.85	13.97
7	11.98	9.73	7.90	21.09
8	10.63	8.09	--	-- 3/
11	6.12	6.26	3.38	9.38
12	10.37	11.91	9.04	12.28

1/ Ninety-five percent confidence interval on the median.

2/ Interviewers 4, 5, 9, and 10 completed too few hospitals to be included in meaningful analysis.

3/ Interviewer 8 completed too few hospitals (5) to be included in meaningful upper and lower bound analysis.

median costs identified by each interviewer. Interviewer 11 appears to be lower.

Further investigation revealed that Interviewer 11's activities were in three PSRO areas, two of which had the lowest general cost levels. Controlling for the area, the unit total costs identified by 11 were not significantly different in areas 6 and 8, whereas, in area 4, 11's data were consistently lower than two counterparts' who also interviewed there. Although the difference in area 4 is significant at the $p = .014$ level, further analysis revealed that Interviewer 11 visited a higher proportion of hospitals that reviewed more than just federal patients. Because programs including nonfederal patients were associated with lower costs (see Chapter 6.0 of this report), it appears that costs in Interviewer 11's hospitals really were lower.

4.3 Definition Of PSRO-Level Cost Categories And Allocation Of Organization Expenditures From Accounting Records Were Based On PSRO Staff Recall

PSRO-level data collection required three basic steps:

- Definition and identification of the activities completed in each predefined activity category (i.e., definition of cost centers)
- Acquisition of expenditure records for all PSRO contract years and preparation for allocation to the activity categories defined
- Allocation of expenditures for each fiscal year to the appropriate activity category (i.e., allocation of expenditures from available records into the cost centers previously described).

During the orientation meeting at each sample PSRO, the project team identified the PSRO personnel who could best identify the tasks completed in each activity category. These individuals were then interviewed to develop activity category data. Once accounting data were acquired and broken down into the most easily usable form, those individuals who describe the activity categories allocated the recorded expenditures as appropriate for each category.

In almost every case, several individuals reviewed the description of activity categories in each PSRO, and, in addition, the executive director of the PSRO reviewed the final cost allocations.

Activity category descriptions were always obtained from the most knowledgeable PSRO staff available. Because little documentation was available of what was done at the PSRO (especially in the first two fiscal years), the recollection of staff members involved was important. Generally speaking, development of activity category descriptions for each PSRO was not difficult. In particular, little difficulty was experienced separating start-up from operating costs.

Because PSROs, in general, have not experienced a great deal of personnel turnover, especially at the higher staff levels, the individuals interviewed had almost always been with their PSRO since the first BQA contract, and, often, they were with a medical care foundation before then. As a consequence, the definition data are as strong as the respondents' memories and their willingness to cooperate in the study. In several cases, where key staff members had left the PSRO, the study team was able to gain their cooperation for interviews so that full UR activity descriptions could be documented. In addition, the activity descriptions for each PSRO, when completed, were returned to the PSRO for comments and modification. Many minor changes were submitted by PSRO personnel in the process, but none affected cost allocations. As a consequence, it appears that the PSRO activity definitions are both reliable and valid to the extent that PSRO officials can recall their activities.

All PSROs had budget and accounting records, as well as personnel records, and accessing them proved to be no problem in the study. However, several problems were encountered in the records of expenditures of PSROs that complicated the cost allocations by fiscal year, including:

- PSRO books were sometimes kept by contract period, not fiscal year. Where this problem occurred, study interviewers worked with the PSRO fiscal staff to develop spreadsheets showing costs by fiscal year.

- PSROs sometimes subcontracted review activity to local foundations, so their only cost data were the total cost of the subcontract. Where this problem occurred, the PSRO eventually took over the actual review operation, including its staff. Thus, the project team was able to use staff who formerly worked with the foundation to allocate PSRO expenditures.

- Some PSROs completed nonfederal reviews as well as other nonstudy activity (e.g., nonreview activity or ambulatory care and long-term care), and fiscal records reflected arbitrary distinctions between them. Where this problem occurred, interviewers worked with PSRO fiscal staff to identify realistic cost breakouts. Because original records often showed allocations that met legal requirements for fund accounting but did not realistically reflect program activities, new accounting allocations were developed.

Using the cost data identified from the PSRO accounting records and the activity category definitions of the Interview Guides as "cost centers," the project team then worked with PSRO officials to allocate costs.

The validity of cost allocations to activity categories is high because the Interview Guides provided clear description of the activities being studied. As a result, PSRO staff knew to which activities they were allocating costs. On the other hand, the reliability of the cost allocations to each activity category is somewhat weaker. If a second study were performed, the same definitions would be developed (i.e., validity or the identification of activities is high), but the costs allocated to each category would be likely to vary (i.e., reliability of assigning costs to the activity categories is lower). In other words, although PSRO staff knew what activities they were developing costs for, they were uncertain as to exactly how much cost to allocate to each activity. For example, small PSROs were able to identify all staff and associate their time specifically with activities that occurred each fiscal year. Officials at larger PSROs were less familiar with the specific work activities of their staff members, so they had to allocate costs associated with groups of personnel. In many cases, the PSRO staff in larger PSROs felt that their judgmental

cost allocations were uncertain. However, once the allocations were made and the final totals were developed, PSRO staff were usually impressed by how realistic the numbers appeared to be. Further, very few individuals had difficulty separating start-up costs from operating costs, so this central focus of the study produced highly reliable data.

Thus, although validity is strong throughout the PSRO-level study, reliability of cost data tends to decrease as the data are disaggregated to increasingly finer levels of detail of PSRO activities. The start-up versus operating cost distinction is highly reliable; the distinctions among aggregated groups of the 20 activity categories such as PSRO administrative, areawide review, nondelegated review, and nonacute care costs are reliable; and the exact cost figures shown for each of 20 activity categories are somewhat uncertain.

4.4 Secondary Data Were Used For The Number Of Hospitals And Federal Patients For Study National Cost Estimates

A number of basic figures were required to make national cost projections. The type of figures used and their origin is as follows:

- Total federal discharges were obtained from estimates of the Medicare, Medicaid, Maternal and Child Health programs, and BQA. See Table 4-II, following this page, for figures and documentation of the sources.

- Total discharges, federal and nonfederal, were obtained from the Master Facilities Index (MFI) for 1975 (1975 was the latest available data).

- Total hospitals were also derived from the MFI for 1975.

- Total hospitals categorized by size in terms of discharges were taken from 1975 MFI data.

Data from the MFI were developed by the University of Maryland as part of a parallel contract with OPEL for the PSRO evaluation.

TABLE 4-II

ESTIMATE OF NATIONAL TOTAL FEDERAL DISCHARGES

	FY72	FY73	FY74	FY75	FY76	FY77
Total Federal Discharges	10,363,120	10,471,204	11,374,008	12,316,798	13,370,093	14,500,000 2/
Medicare (Discharges) 1/	6,385,426	6,671,085	7,526,286	7,963,771	8,441,018	8,879,951
Medicaid (Discharges) 2/	3,739,294	3,561,719	3,609,322	4,114,627	4,690,675	5,381,649
Maternal and Child Health (Discharges) 3/	238,400	238,400	238,400	238,400	238,400	238,400

1. FY72 Through FY76 Medicare
   - Discharge figures are based on admissions figures (corrected for those who were disqualified) for the same period and are from the June, 1977, update of admissions notices processed by the SSA central offices

2. FY77 Medicare
   - Estimated average 5.2 percent increase in total admissions between FY76 and FY77 based on BQA estimates

3. FY72 Through FY74 Medicaid
   - Medicaid Recipient Characteristics and Units of Selected Medical Services
     FY72 - Table 7
     FY73 - Table 8
     FY74 - Table 16
     Figures include actual and estimated number of discharges. Estimated figures were calculated in two ways:
     - For states with only one or two years reporting, an estimated figure was calculated for other missing years using the reported trends in Medicaid discharges
     - For states not reporting any discharges for any years, a mean number of discharges in region was used

   FY75 Through FY77 Medicaid
   - No Medicaid figures were available for these years, so they were estimated as follows. BQA uses the figure 14,500,000 for total federal discharges in FY77. Subtracting the estimated number of Medicare and MCH beneficiaries supplies an estimate of the FY77 Medicaid beneficiaries. FY75 and FY76 Medicaid figures were estimated assuming a uniform growth rate from FY74 through FY77.
   - Medicare beneficiaries also receiving Medicaid support are excluded from Medicaid figures

4. Maternal and Child Health (MCH) FY72 and FY73
   - Combined participant figures from:
     - Maternity and Infant Care Projects Statistical Summary FY72, FY73, Table 4
     - Maternal and Child Health Services of State and Local Health Departments FY72 (MCHS Statistical Series 7), Tables 6 and 9
     - Children Who Received Physicians' Services Under the Crippled Children's Program FY72 (MCHS Statistical Series 8), Table 6

   MCH FY74, FY75, and FY76
   - Personal communication with Mr. Trauger to the effect that BCHS predicts little change in number of MCH participants for FY74, FY75, and FY76

4.5 The 12 Sample PSROs Have The Same Level Of Inpatient Days As All 203 PSROs In The United States; On Less Important Variables, The Sample PSROs Differ

As described in Chapter 3.0, the 12 sample PSROs were selected to represent all 203 PSROs in the United States. Because the pool of usable PSROs was small, i.e., only 22 could be used, it is appropriate to consider how well the 12 that were selected represent the universe of 203 PSROs in the United States. As illustrated in Table 4-III, following this page, the sample PSROs are almost identical to the universe of PSROs on one key variable, the number of inpatient days per 100,000 population in 1970. The per capita income and the level of physicians per 100,000 population are also very similar between sample areas and the universe.

The remaining variables indicate varying degrees of dissimilarity. The distribution of sample PSROs by HEW region provides a general regional representation. The percent of population over 65 is lower in sample areas than in the universe. The percent of rural population to urban population in sample PSRO areas is higher than the national average. And the number of outpatient units per 100,000 population is lower in the sample than in the universe.

Summarizing the comparison, to the extent that the number of inpatient days, area per capita income, and the ratio of physicians to total population are key variables in influencing the PSRO UR program, the PSRO sample area selection is very good. However, if variables such as regional distribution, percent population over 65, percent rural population, or number of outpatient visits per 100,000 population are important, PSRO sample selection appears correspondingly weaker.

* * * *

In summary, detailed interview guides were developed to identify PSRO and hospital inpatient UR related costs. Trained interviewers then collected

TABLE 4-III

COMPARISON OF 12 SAMPLE PSROs TO UNIVERSE
OF 203 PSROs ON KEY DEMOGRAPHIC VARIABLES

Variable	Distribution of 12 Sample PSROs (PSROs Qualified for Use in Study in Parentheses)	Universe of 203 PSROs	% Difference 1/
Inpatient days/100,000 population (1970)	131,937	131,891	neg.
Percent of Population 65 Years or Older (1970)	8.5	9.9	14%
Number of PSROs in Federal Regions:			
I & II	1 (1)	40	
III & IV	3 (7)	54	
V & VI	5 (6)	58	
VII & VIII	1 (4)	14	
IX & X	2 (4)	37	
All Region Total	12 (22)	203	
Percent Rural Population (1970)	31.0	26.4	-17%
Physicians/100,000 Population	136	149	9%
Number of Outpatient Visits/100,000 Population (1970)	88,689	109,075	19%
Per Capita Income (1970)	$2,892	$3,115	7%

1/ Difference based on $\frac{\text{Universe - Sample}}{\text{Universe}}$

data at 12 PSROs and 90 delegated hospitals selected on a random stratified basis within these PSRO areas. Cost data on nondelegated review were identified at the PSROs visited at the same time operating costs were assessed. In addition, hospital new UR costs were identified in 23 hospitals in non-PSRO areas, using the same cost assessment strategy.

Because very detailed interviewing procedures were employed, the validity of the cost data is high. However, study reliability is not as high because cost allocations essentially relied on the recall of staff who worked on the UR program (few records were available that could be used directly for cost collection and allocation purposes either at hospitals or PSROs). All in all, the cost data developed from sample hospitals and PSROs are reasonable in terms of both validity and reliability.

5.0 FINDINGS: ESTIMATED NATIONAL COST OF UTILIZATION REVIEW FOR INPATIENTS AT SHORT TERM, ACUTE CARE, NONFEDERAL HOSPITALS

5.0 FINDINGS: ESTIMATED NATIONAL COST OF UTILIZATION REVIEW FOR INPATIENTS AT SHORT TERM, ACUTE CARE, NONFEDERAL HOSPITALS

Estimates of the total nationwide cost of fully implemented inpatient UR programs under PSROs in acute care, short term, nonfederal hospitals are presented in this chapter. Each cost estimate answers one of the basic study objectives or shows what the cost impact would be if certain basic assumptions about the character of PSRO UR are changed. In brief, this chapter presents the following estimates for the national total hospital and PSRO operating UR:

- Costs for all federal inpatients with full implementation, based on current federal reimbursement guidelines
- Costs for all patients, federal and nonfederal, with full implementation based on current federal reimbursement guidelines (two figures are shown, one assuming no economies to scale and the other reflecting possible economies indicated in current cost data)
- Costs for all federal inpatients actually reviewed in 1976 based on current federal reimbursement guidelines
- Costs for all federal inpatients with full implementation, based on federal reimbursement guidelines with unit costs weighted by sample PSRO area rather than by hospital observed
- Costs for all federal inpatients with full implementation, based on federal reimbursement guidelines with unit costs weighted by the number of hospital days covered by PSRO review activities in sample hospitals
- Costs for all federal inpatients with full implementation, based on federal reimbursement guidelines, assuming 90 (rather than 75) percent of federal discharges are covered by delegated review

- Costs for all federal inpatients with full implementation, based on federal reimbursement guidelines assuming a selected sample of 20 percent of federal patients are targeted for concurrent review

- Costs for all federal inpatients with full implementation, based on federal reimbursement guidelines assuming that hospitals which had aberrant high costs are removed from the data base

- Costs for all federal inpatients with full implementation, without the strictures of federal reimbursement guidelines (i.e., all UR activity covered under UR legislation is included without limits on the number and type of activities)

- Costs for all federal inpatients with full implementation, based on federal reimbursement guidelines with delegated hospital costs based on the observed relationship between total UR program cost in a hospital and the hospital's bed size.

- Manpower demands by selected personnel category to operate the program, assuming all federal inpatients are reviewed and federal reimbursement guidleines are followed

- Costs for all federal inpatients in 1974, based on UR activities identified in sample hospitals that were done in compliance with old UR (i.e., UR under Medicare regulations effective in 1974)

These estimated costs, including the 90 percent confidence interval on the estimate, are summarized for comparative purposes in Figure 5-I, following this page. All estimates are based on unit costs observed in 1976 and on the number of federal discharges reviewed in that year (except for the old UR estimate which is based on 1974 figures).

The basic cost units used to develop the estimates are based on the unit data collected at sample hospitals and PSROs. However, because the PSRO program was not fully implemented nationally at the time of this study, a number of assumptions as to how the program might develop had to be made to

FIGURE 5-I

SUMMARY OF NATIONAL UR COST ESTIMATES

	Excluding Donated Physician Time		Including Donated Physician Time	
	Cost	90% Confidence Interval	Cost	90% Confidence Interval
5.1 Federal Patients (13.4 million)	$220.3	$196.1-244.5	$237.1	$213.4-260.8
5.2A All Patients, Federal and Nonfederal (35.6 million; no economies)	$570.9	$508.1-633.7	$609.9	$542.8-677.0
5.2B All Patients, Federal and Nonfederal (35.6 million; assumes economies)	$438.8	NA 1/	$477.8	NA 1/
5.3 Federal Patients Actually Covered in 1976 (4.1 million)	$ 66.1	$ 58.8- 73.4	$ 70.3	$ 62.6- 78.0
5.4 Federal Patients (13.4 million; costs weighted by PSRO area)	$223.7	$199.1-248.3	$237.7	$213.9-261.5
5.5 Federal Patients (13.4 million; costs weighted by covered inpatient days)	$226.2	$199.1-253.3	$241.0	$214.5-267.5
5.6 Federal Patients (13.4 million; 90% delegated)	$220.5	$196.2-244.8	$240.4	$216.4-264.4
5.7 Federal Patients (13.4 million; 20% selected sample for CR)	$151.7	$130.5-172.9	$159.6	$137.3-181.9
5.8 Federal Patients (13.4 million; aberrant high cost hospitals excluded)	$214.6	$191.0-238.2	$230.5	$207.5-253.6
5.9 Federal Patients (13.4 million; costs incurred without strictures of reimbursement guidelines)	$232.6	$139.6-255.9	$265.4	$238.8-286.0
5.10 Federal Patients (13.4 million; based on relationship of UR cost to bed size)	$225.5	NA 2/	NA	NA
5.11 Manpower Requirements for PSRO UR in Hospitals	15,028 FTEs	NA 2/	NA	NA
5.12 Cost of Old UR in 1974	$ 50.1	$ 39.6- 60.6	$ 70.1	$ 58.2- 82.0

1/ The unit cost basis for components of this estimate was developed judgmentally, so confidence intervals cannot be provided.

2/ Variance not calculated. Including donated physician figure also not calculated.

make national cost estimates for full-scale PSRO operations. The assumptions used for Estimate 5.1, our main study objective, have been fully documented in Chapter 3.0. The cost estimates provided in this chapter represent the systematic variation of the key assumptions as to the:

- Inpatients to be reviewed, e.g., federal patients only; all patients, including federal and nonfederal; a sample of 20 percent of federal patients; etc.
- Unit costs to used, e.g., two factors affect the unit costs, including the weighting strategy and "allowable cost" constraints such as use of PSRO reimbursement guidelines versus actual costs incurred with no federal reimbursement limitations, etc.

Total cost for each estimate comprises three types of costs:

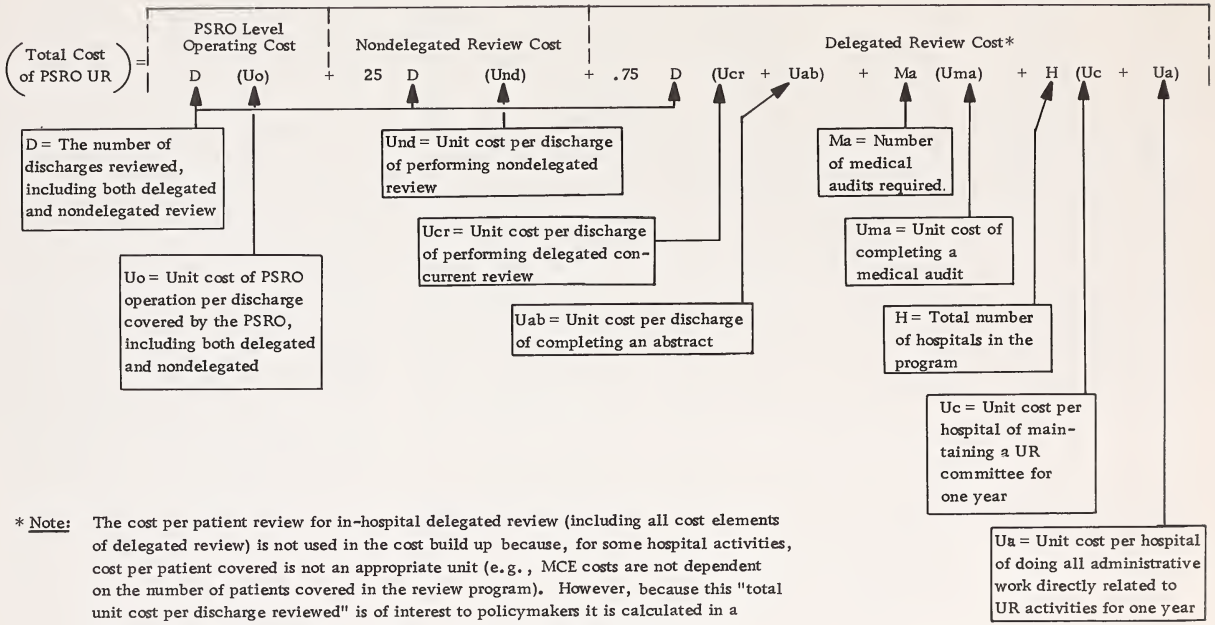
- PSRO-level operating costs (excluding all start-up, nondelegated review, and nonacute care UR program costs)
- PSRO nondelegated hospital review costs
- Delegated hospital review costs

The "unit cost" and "inpatients to be reviewed" assumptions used for the cost estimates are detailed in Table 3-IV and summarized by the formula in Figure 5-II, following this page. The three types of costs identified above are accounted for by components of this equation. Note the simplicity of the PSRO operating and nondelegated review cost components contrasted to the delegated review portion. This is required because delegated review costs are calculated based on a mix of relatively discrete activities in hospitals. For each succeeding cost estimate presented in this chapter, the changes in assumptions will be identified by showing alterations in this formula. The effects of each change in assumptions will also be displayed for each cost estimate by showing the three cost element build-up (see above) supported by the multistage build-up for the cost of delegated review.

FIGURE 5-II

Office of Planning, Evaluation, and Legislation

FORMULA FOR ESTIMATION OF THE TOTAL COST OF PSRO UR FOR INPATIENTS AT HOSPITALS


Total Cost of PSRO UR
=
PSRO Level Operating Cost
Nondelegated Review Cost
Delegated Review Cost*
D (Uo) + 25 D (Und) + .75 D (Ucr + Uab) + Ma (Uma) + H (Uc + Ua)
D = The number of discharges reviewed, including both delegated and nondelegated review
Uo = Unit cost of PSRO operation per discharge covered by the PSRO, including both delegated and nondelegated
Und = Unit cost per discharge of performing nondelegated review
Ucr = Unit cost per discharge of performing delegated concurrent review
Uab = Unit cost per discharge of completing an abstract
Ma = Number of medical audits required.
Uma = Unit cost of completing a medical audit
H = Total number of hospitals in the program
Uc = Unit cost per hospital of maintaining a UR committee for one year
Ua = Unit cost per hospital of doing all administrative work directly related to UR activities for one year

* Note: The cost per patient review for in-hospital delegated review (including all cost elements of delegated review) is not used in the cost build up because, for some hospital activities, cost per patient covered is not an appropriate unit (e.g., MCE costs are not dependent on the number of patients covered in the review program). However, because this "total unit cost per discharge reviewed" is of interest to policymakers it is calculated in a footnote to each cost estimate that follows. Calculation involves dividing the total delegated review costs by the number of patients reviewed.

Before presenting the cost estimates, certain factors that affect these cost estimates should be understood, including:

- Only costs of acute inpatient utilization review are estimated; no costs of ambulatory or long-term care review are included. Overall PSRO program costs including nonacute and ambulatory care review would be much higher.

- Possible economies of scale (or economies occurring due to the inclusion of less expensive nonfederal review cases) are discussed in 5.2 when the option to include all patients (federal and nonfederal) with full implementation of PSRO nationwide is considered.

- Speculation as to the possible economic repercussions of the development of new review technologies is not attempted. Costs are estimated as they were observed so that the reader may apply any pertinent assumptions based on the expected effect of changes in review techniques.

- The quantity and quality of effort applied by hospitals in utilization review programs may increase as greater pressure for performance is placed on them by growing, more intensive PSRO hospital monitoring efforts. It appears that PSROs are indeed developing better hospital UR monitoring techniques, and at least some improvements in review activity are achievable without changes in staffing levels (i.e., cost). It appears likely, however, that hospitals will increase their staff (or at least try to) if the PSROs demand a stronger review effort.

- A number of hospitals added PSRO staff in 1977 in anticipation of direct reimbursement of these costs by the Federal government; no hospitals were observed to reduce staff. The cost of these new personnel was not included in the 1976 cost figures collected for this study, but they will cause significant increases in actual 1977 unit costs. When direct reimbursement is accessible to all hospitals, upward pressure on staff levels is likely to increase. PSROs and fiscal intermediaries will need to scrutinize staff increases carefully to prevent unnecessary staff expansion and cost increases. Because the money that pays for the review staff comes from the Medicare trust funds, neither the PSRO nor the fiscal intermediary has much incentive to keep staffing levels down, so costs will probably creep up.

- The full cost of abstracting is included in all cost estimates because it is difficult to develop a precise allocation of abstracting costs for PSRO activities where abstracting is required for non-PSRO purposes. Federal reimbursement guidelines allow payment for the full cost of abstracting where it is done for PSRO purposes alone (such as for non-delegated review in hospitals that had no abstracting service or in hospitals that do two abstracts, one for PSRO and one for other purposes). This slightly increases the overall cost estimates for federal PSRO UR because many hospitals may be able to allocate some of their abstracting costs to other functions (such as third-party reimbursement). However, the impact of including all abstracting costs is small because abstracting is less than ten percent of the estimated cost of PSRO UR; only a small percentage of this would be allocated to other abstracting functions under present conditions.

- Where the cost of donated physician time was added into the cost estimates, 90 percent of all claimable physician time (whether formerly paid or donated) was costed at $25 per hour for the number of hours allowable under federal reimbursement guidelines. To the extent that the portion of physician time for which reimbursement is claimed varies from 90 percent or that $25 per hour is not realistic (the national average physician income works out to approximately $25 per hour), the cost estimates including all physician time could change.

Cost projections for acute care inpatient review, based on the data collected from 90 PSRO delegated hospitals, 23 non-PSRO hospitals, and 12 PSRO areas, are presented below, including an interval within which we are 90 percent certain that the true cost lies. The 90 percent confidence interval is a statistical measure that provides an indication of the precision achieved in the national cost estimates due to the variances observed in the unit cost data on which it is based.

5.1 Estimated Cost Of PSRO UR For Federal Inpatients In Acute Care Facilities With Full National Implementation, Based On Federal Reimbursement Guidelines

Costs Shown	Excludes Donated Physician Time [1]	Includes Donated Physician Time [1]
PSRO Operating $7.11 x 13,370,993	$ 95,100,000 ± 22%	$ 95,100,000 ± 22%
Nondelegated Review $8.89 x 3,342,523	$ 29,700,000 ± 29%	$ 29,700,000 ± 29%
Delegated Review See Table 5-I for detail [2]	$ 95,500,000 ± 7%	$112,300,000 ± 7%
Total Cost	$220,300,000 ± 11%	$237,100,000 ± 10%

Total Cost [3] = D(Uo) + .25 D(Und) + .75 D(Ucr+ Uab) + Ma(Uma) + H(Uc +Ua)

This cost estimate reflects the cost of the PSRO program assuming full national implementation for all federal patients, based on cost experiences and UR activities observed in 1976.

The figure developed by the Institute of Medicine (IOM) in their recent study [4] was $200 million for hospital inpatient quality assurance under PSRO. The IOM figure, however, was based on actual costs, not taking into account federal reimbursement policy (because they were not finalized in the Fall of 1976 when the IOM study was completed).

1/ The percent figures shown after the dollar amount represent the 90 percent confidence interval for the cost estimates shown.

2/ Table 5-I, following this page, shows the unit costs used to build up the total costs shown here. Dividing the total cost by 10,027,570 (the number of delegated federal reviews expected), provides a total unit cost of $9.52 for delegated review. Because the component costs of delegated review are built upon different units, this total unit cost is only appropriate when considering the national cost estimate shown in 5.1.

3/ Units used may be identified by looking at the units shown in the chart for the PSRO Operating and Non-delegated Review costs. Delegated review cost units are all identified in Table 5-I, following this page.

4/ Evaluation Study of Health Care Quality Assurance Programs; November, 1976; page 78. Completed under HEW contract number 282-75-0437 by the Institute of Medicine; Linda K. Demlo, Ph.D., Study Director.

TABLE 5-I

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.1

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review 1/	$ 6.12	x	10,027,570	Discharges	=	$ 61.4 ± $5.8
Medical Audits	$ 171	x	32,660	Required Medical Audits	=	$ 5.6 ± $ .97
Abstracting	$ 1.58	x	10,027,570	Discharges	=	$ 15.8 ± $1.98
Utilization Review Committee 2/	$ 930	x	5,087	Delegated Hospitals	=	$ 4.7 ± $0.90
Direct Administration 2/	$1,573	x	5,087	Delegated Hospitals	=	$ 8.0 ± $1.98
	Total (Excluding Donated Physician Time)					$ 95.5 ± $6.6

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 7.23	x	10,027,570	Discharges	=	$ 72.5 ± $7.0
Medical Audits 1/	$ 209	x	32,660	Required Medical Audits	=	$ 6.8 ± $0.99
Abstracting	$ 1.58	x	10,027,570	Discharges	=	$ 15.8 ± $1.98
Utilization Review Committee 2/	$1,780	x	5,087	Delegated Hospitals	=	$ 9.1 ± $1.01
Direct Administration 2/	$1,589	x	5,087	Delegated Hospitals	=	$ 8.1 ± $1.86
	Total (Including Donated Physician Time)					$112.3 ± $7.6

1/ The unit cost of medical audits shown is based on federal reimbursement guidelines, which allow payment for a proportion of total MCE costs equal to the proportion of federal discharges to total discharges in the hospital. As a result, this represents about one-third of the cost of MCEs observed by hospital interviewers.

2/ The unit costs used here represent a proportion of the total cost observed equal to the proportion of federal patients reviewed to all patients reviewed.

5.2 Estimated Cost Of PSRO UR For All Inpatients (Federal And Nonfederal) In Acute Care Facilities With Full National Implementation, Based On Federal Reimbursement Guidelines

Costs Shown	Excludes Donated Physician Time	Includes Donated Physician Time
PSRO Operating $7.11 x 35,645,664	$253,400,000 ± 22%	$253,400,000 ± 22%
Nondelegated Review $8.89 x 8,911,416	$ 79,200,000 ± 29%	$ 79,200,000 ± 29%
Delegated Review See Table 5-IIA for detail 1/	$238,300,000 ± 7%	$277,300,000 ± 9%
Total Cost (Assumes No Economies)	$570,900,000 ± 11%	$609,900,000 ± 11%
Total Cost (Assumes Economies of Scale)	$438,800,000 3/	$477,800,000 3/

Total Cost 2/ = D(Uo) + .25 D(Und) + .75 D(Ucr + Uab) + Ma(U1ma) + H(U1c + U1a)

Change: D = All patients
U1ma, U1c, U1a unit costs change because costs are counted in proportion to the number of patients covered by the UR program, not just federal patients as in 5.1

The top four lines of the above chart present the estimated cost of a national PSRO UR program, assuming coverage of all patients, where no economies of scale are achieved. The fifth line identifies an estimate based on economies indicated in the data collected. It is fair to assume that these economies occur both because of the increased size of operations when 100 percent review is used and because covering the less expensive-to-review nonfederal patients tends to bring the average cost down.

1/ Table 5-IIA, following this page, shows the unit costs used to build up the total costs shown here. Dividing the total cost by 26,734,248, provides a total unit cost of $8.91 for delegated review for this cost estimate.

2/ Units used may be identified by looking at the units shown in the chart for the PSRO Operating and Nondelegated Review costs. Delegated review cost units are all identified in Table 5-IIA, following this page.

3/ Confidence intervals for these estimates are very broad. See text, following this page, for explanation of the origin of these cost estimates.

TABLE 5-IIA

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.2

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 6.12	x	26,734,248	Discharges	=	$163.6 ± $15.5
Medical Audits 1/	$ 505	x	32,660	Required Medical Audits	=	$ 16.5 ± $ 2.6
Abstracting	$ 1.58	x	26,734,248	Discharges	=	$ 42.2 ± $ 5.26
Utilization Review Committee 1/	$1,206	x	5,087	Delegated Hospitals	=	$ 6.1 ± $ 1.2
Direct Administration 1/	$1,950	x	5,087	Delegated Hospitals	=	$ 9.9 ± $ 2.3
	Total (Excluding Donated Physician Time)					$238.3 ± $16.8

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 7.23	x	26,734,248	Discharges	=	$193.3 ± $18.69
Medical Audits 1/	$ 614	x	32,660	Required Medical Audits	=	$ 20.1 ± $ 2.59
Abstracting	$ 1.58	x	26,734,248	Discharges	=	$ 42.2 ± $ 5.26
Utilization Review Committee 1/	$2,291	x	5,087	Delegated Hospitals	=	$ 11.7 ± $ 1.38
Direct Administration 1/	$1,973	x	5,087	Delegated Hospitals	=	$ 10.0 ± $ 2.8
	Total (Including Donated Physician Time)					$277.3 ± $26.0

1/ Unit costs shown are based on the costs observed in the sample hospitals, only 19 of which review all patients. It is possible that the UR Committee and Direct Administration costs would go up slightly at hospitals currently reviewing less than 100 percent of patients, but, because they act more like fixed costs, the change should be relatively small.

Unit cost estimates with economies of scale were developed as follows:

- PSRO Operating Costs--When unit operating cost at the 12 sample PSROs was related to the number of discharges reviewed, the data showed a weak correlation between these two variables, $r = -.48$. Clearly, economies of scale were indicated. To identify the estimated cost, assuming all patients are reviewed, the average number of discharges per PSRO was calculated (e.g., 34,645,664 discharges ÷203 PSROs ~ 175,000 discharges/PSRO). Using this estimate of the expected discharges to be reviewed and the relationship found between unit costs and number of discharges reviewed, that is:

$$\text{Unit Operating Cost} = \frac{\text{Discharges Reviewed} - 105{,}787}{-6{,}326}$$

  We found a predicted cost of -$11 per discharge reviewed. Because a negative cost for review is nonsensical, a graph relating unit operating cost to discharges reviewed was developed. Based on this analysis, it appears that $4 per discharge is the minimum cost level for larger PSRO operations. Therefore, $4 was used in the cost projection. However, because it is based on analytical judgment, the confidence interval around this estimate would also be judgmental and would clearly be very broad so none has been made.

- Nondelegated Review Costs--A correlation of -.53 between the number of nondelegated reviews and the unit costs of nondelegated reviews in the 12 PSRO sample areas was found, with the following equation describing this relationship:

$$\text{Unit Cost of Nondelegated Review} = \frac{\text{Nondelegated Reviews} - 69{,}968}{-4{,}051}$$

  When 44,000 reviews (i.e., approximately 25 percent of 175,000) is used, the result is a cost of about $6.50 per review of nondelegated discharge. Although the 90 percent confidence interval on the $6.50 estimate is greater than the estimate itself, the figure was used because it provides the only available estimate.

- Delegated Review Costs--These costs were developed based on the 19 sample hospitals that did 100 percent review (see Table 5-IIB, following this page).

TABLE 5-IIB

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.2

N = 19 Hospitals Reviewing 100 Percent Of Patients

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 5.00	x	26,734,248	Discharges	=	$133.7 ± $34.2
Medical Audits 1/	$ 444	x	32,660	Required Medical Audits	=	$ 14.5 ± $ 6.0
Abstracting	$ 1.16	x	26,734,248	Discharges	=	$ 31.0 ± $11.3
Utilization Review Committee 1/	$1,464	x	5,087	Delegated Hospitals	=	$ 7.4 ± $ 2.8
Direct Administration 1/	$1,904	x	5,087	Delegated Hospitals	=	$ 9.7 ± $ 5.2
	Total (Excluding Donated Physician Time)					$196.3 ± $37.0

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 5.67	x	26,734,248	Discharges	=	$151.6 ± $34.2
Medical Audits 1/	$ 555	x	32,660	Required Medical Audits	=	$ 18.1 ± $ 6.1
Abstracting	$ 1.16	x	26,734,248	Discharges	=	$ 31.0 ± $11.3
Utilization Review Committee 1/	$2,545	x	5,087	Delegated Hospitals	=	$ 12.9 ± $ 3.1
Direct Administration 1/	$2,009	x	5,087	Delegated Hospitals	=	$ 10.2 ± $ 5.4
	Total (Including Donated Physician Time)					$223.8 ± $37.1

1/ Unit costs shown are based on the full costs observed in the 19 sample hospitals that review all patients. It is probable that the UR Committee and Direct Administration costs, due to the larger scope of responsibility, would be somewhat higher than the costs incurred in hospitals where less than 100 percent review occurs. Comparing these figures to like figures in Table 5II-A confirms this expectation.

Although high confidence cannot be placed on the estimates showing economies of scale, it is apparent that substantial savings may be achieved on a per unit basis should 100 percent review be implemented.

5.3 Estimated Cost Of PSRO UR For Federal Inpatients Actually Reviewed In 1976, Based On Federal Reimbursement Guidelines

Costs Shown	Excludes Donated Physician Time	Includes Donated Physician Time
PSRO Operating $7.11 x 4,081,089	$29,000,000 ± 22%	$29,000,000 ± 22%
Nondelegated Review $8.89 x 1,374,032	$12,200,000 ± 29%	$12,200,000 ± 29%
Delegated Review See Table 5-III for detail 1/	$24,900,000 ± 7%	$29,100,000 ± 7%
Total Cost	$66,100,000 ± 11%	$70,300,000 ± 11%

Total Cost 2/ = Ddnd(Uo) + Nd(Und) + Dd(Ucr + Uab) + Ma(Uma) + H(Uc + Ua)

Change: Ddnd = All federal patients actually reviewed in 1976
Nd = The number of discharges actually reviewed in nondelegated status in 1976
Dd = The number of discharges actually reviewed in delegated status in 1976

This figure represents the estimated actual cost of PSRO inpatient review for acute care facilities as it occurred in 1976 with the constraints of federal reimbursement guidelines applied. These estimates compare to $220.3 million and $237.1 million (including donated physician time) for the program, assuming full implementation for 1976 (see 5.1).

1/ Table 5-III, following this page, identifies the unit costs used to build up the total costs shown here. Dividing the total by 2,707,057, provides a total unit cost of $9.20 for delegated review for this cost estimate.

2/ Units used are identified in the chart above and in Table 5-III, following this page.

TABLE 5-III

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.3

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 6.12	x	2,707,057	Discharges	=	$16.6 ± $1.6
Medical Audits 1/	$ 171	x	7,776	Required Medical Audits	=	$ 1.3 ± $0.2
Abstracting	$ 1.58	x	2,707,057	Discharges	=	$ 4.3 ± $0.5
Utilization Review Committee 1/	$ 930	x	1,071	Delegated Hospitals	=	$ 1.0 ± $0.2
Direct Administration 1/	$1,573	x	1,071	Delegated Hospitals	=	$ 1.7 ± $0.4
	Total (Excluding Donated Physician Time)					$24.9 ± $1.7

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 7.23	x	2,707,057	Discharges	=	$19.6 ± $1.9
Medical Audits 1/	$ 209	x	7,776	Required Medical Audits	=	$ 1.6 ± $0.2
Abstracting	$ 1.58	x	2,707,057	Discharges	=	$ 4.3 ± $0.5
Utilization Review Committee 1/	$1,780	x	1,071	Delegated Hospitals	=	$ 1.9 ± $0.2
Direct Administration 1/	$1,589	x	1,071	Delegated Hospitals	=	$ 1.7 ± $0.4
	Total (Including Donated Physician Time)					$29.1 ± $2.0

1/ Unit costs used are the same as for the estimate in 5.1 because the patient base considered is federal patients.

5.4 Estimated Cost Of PSRO UR For Federal Inpatients With Full National Implementation, Based On Federal Reimbursement Guidelines And Mean Unit Costs Weighted By PSRO Area

Costs Shown	Excludes Donated Physician Time	Includes Donated Physician Time
PSRO Operating $7.11 x 13,370,993	$ 95,100,000 ± 22%	$ 95,100,000 ± 22%
Nondelegated Review $8.89 x 3,342,523	$ 29,700,000 ± 29%	$ 29,700,000 ± 29%
Delegated Review See Table 5-IV for detail 1/	$ 98,900,000 ± 8%	$112,900,000 ± 7%
Total Cost	$223,700,000 ± 11%	$237,700,000 ± 10%

Total Cost 2/ = D(Ud) + .25 D(Und) + .75 D(U2cr + U2ab) + Ma(U2ma) + H(U2c + U2a)

Change: U2cr, U2ab, U2ma, U2c, and U2a identify unit costs changed due to weighting by the means from the nine PSRO areas rather than all 90 sample PSRO hospitals

These cost estimates are provided for comparison to the estimates in 5.1. The only difference is a change in the weighting strategy for delegated review that involves establishing PSRO area estimates and weighting them equally to determine the national unit costs. This contrasts with the prime study approach of putting all 90 delegated hospitals into the same pool and taking the unweighted average. These figures indicate there is very little impact on the cost estimates due to the change in weighting. This finding is not surprising because unit costs were not found to vary consistently among the sample PSRO areas. The original weighting strategy, using all 90 hospitals, is considered the best.

1/ Table 5-IV, following this page, identifies the unit costs used to build up the total costs shown here. Dividing the total by 10,027,570, provides a total unit cost estimate of $9.86 for delegated review for this cost estimate.

2/ Units used are identified in the chart above and in Table 5-IV, following this page.

TABLE 5-IV

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.4

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost 1/	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 6.44	x	10,027,570	Discharges	=	$ 64.6 ± $7.5
Medical Audits	$ 186	x	32,660	Required Medical Audits	=	$ 6.1 ± $1.0
Abstracting	$ 1.48	x	10,027,570	Discharges	=	$ 14.8 ± $1.5
Utilization Review Committee	$1,022	x	5,087	Delegated Hospitals	=	$ 5.2 ± $0.6
Direct Administration	$1,607	x	5,087	Delegated Hospitals	=	$ 8.2 ± $1.1
	Total (Excluding Donated Physician Time)					$ 98.9 ± $7.8

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 7.31	x	10,027,570	Discharges	=	$ 73.3 ± $7.3
Medical Audits	$ 223	x	32,660	Required Medical Audits	=	$ 7.3 ± $1.0
Abstracting	$ 1.48	x	10,027,570	Discharges	=	$ 14.8 ± $1.5
Utilization Review Committee	$1,812	x	5,087	Delegated Hospitals	=	$ 9.2 ± $1.0
Direct Administration	$1,632	x	5,087	Delegated Hospitals	=	$ 8.3 ± $1.1
	Total (Including Donated Physician Time)					$112.9 ± $7.7

1/ Unit costs for all activities change from previous estimates because of the PSRO area oriented, rather than hospital oriented, weighting strategy.

5.5 Estimated Cost Of PSRO UR For All Federal Inpatients In Acute Care Facilities With Full National Implementation, Based On Federal Reimbursement Guidelines And Mean Unit Costs For Delegated Review Weighted By Number Of Hospital Days Covered By The Review Program Observed In Sample Hospitals

Costs Shown	Excludes Donated Physician Time	Includes Donated Physician Time
PSRO Operating $7.11 x 13,370,993	$ 95,100,000 ± 22%	$ 95,100,000 ± 22%
Nondelegated Review $8.89 x 3,342,523	$ 29,700,000 ± 29%	$ 29,700,000 ± 29%
Delegated Review See Table 5-V for detail 1/	$101,400,000 ± 13%	$116,200,000 ± 13%
Total Cost	$226,200,000 ± 12%	$241,000,000 ± 11%

Total Cost 2/ = D(Uo) + .25 D(Und) + .75 D(U3cr + U3ab) + Ma(U3ma) + H(U3c + U3a)

Change: U3cr, U3ab, U3ma, U3c, and U3a identify unit costs changed due to weighting by the number of patient days covered by review programs observed at sample hospitals rather than all 90 sample PSRO hospitals

These cost estimates are provided for comparison to the estimates in 5.1. The only difference is a change in the weighting strategy for delegated review that involves establishing estimates weighted by the number of days of stay by patients covered by the program in sample hospitals. Again, the change in weighting strategy affects the overall cost estimate very little. As a result, the use of the original strategy, i.e., weighting all 90 hospitals equally, is preferred.

1/ Table 5-V, following this page, identifies the unit costs used to build up the total costs shown here. Dividing the total by 10,027,570, provides a total unit cost estimate of $10.11 per delegated discharge for this cost estimate.

2/ Unit costs are identified in the chart above and in Table 5-V, following this page.

TABLE 5-V

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.5

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost 1/	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 6.15	x	10,027,570	Discharges	=	$ 61.7 ± $12.2
Medical Audits	$ 225	x	32,660	Required Medical Audits	=	$ 7.3 ± $ 2.13
Abstracting	$ 1.44	x	10,027,570	Discharges	=	$ 14.4 ± $ 2.6
Utilization Review Committee	$1,244	x	5,087	Delegated Hospitals	=	$ 6.3 ± $ 1.77
Direct Administration	$2,300	x	5,087	Delegated Hospitals	=	$ 11.7 ± $ 3.69
	Total (Excluding Donated Physician Time)					$101.4 ± $13.3

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 7.12	x	10,027,570	Discharges	=	$ 71.4 ± $13.8
Medical Audits	$ 260	x	32,660	Required Medical Audits	=	$ 8.5 ± $ 2.3
Abstracting	$ 1.44	x	10,027,570	Discharges	=	$ 14.4 ± $ 2.6
Utilization Review Committee	$2,021	x	5,087	Delegated Hospitals	=	$ 10.3 ± $ 2.3
Direct Administration	$2,274	x	5,087	Delegated Hospitals	=	$ 11.5 ± $ 3.46
	Total (Including Donated Physician Time)					$116.2 ± $14.8

1/ Unit costs for all activities change from previous estimates because of the patient days for the covered population weighting, rather than weighting by other means.

5.6 Estimated Cost Of PSRO UR For All Federal Inpatients With Full National Implementation, Based On Federal Reimbursement Guidelines, Assuming 90 (Rather Than 75) Percent Of Federal Discharges Are Covered By Delegated Review

Costs Shown	Excludes Donated Physician Time	Includes Donated Physician Time
PSRO Operating $7.11 x 13,370,993	$ 95,100,000 ± 22%	$ 95,100,000 ± 22%
Nondelegated Review $8.89 x 1,337,009	$ 11,900,000 ± 29%	$ 11,900,000 ± 29%
Delegated Review See Table 5-VI for detail 1/	$113,500,000 ± 7%	$133,400,000 ± 9%
Total Cost	$220,500,000 ± 11%	$240,400,000 ± 10%

Total Cost 2/ = D(Uo) + .1D(Und) + .9D(Ucr + Uab) + Ma(Uma) + H4(Uc + Ua)

Change: The proportion of federal patients reviewed in delegated status was shifted from .75 to .90. Thus, the total proportion of nondelegated reviews changes from .25 to .10.
H4 = Number of hospitals in delegated status increases

These cost estimates are provided for comparison to 5.1, assuming that coverage of 10 percent of the federal patients in nondelegated status is more realistic than 25 percent because current trends indicate increasing degrees of delegation. Thus, $220.3 million and $237.1 million for 25 percent nondelegated compare to $220.5 million and $240.4 million, assuming 10 percent nondelegated.

1/ Table 5-VI, following this page, identifies the unit costs used to build up the total costs shown here. Dividing the total by 12,033,894, provides a total unit cost estimate of $9.43 for delegated review for this cost estimate.

2/ Units used are identified in the chart above and in Table 5-VI, following this page.

TABLE 5-VI

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.6

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost 1/	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 6.12	x	12,033,894	Discharges	=	$ 73.6 ± $ 7.0
Medical Audits	$ 171	x	32,660	Required Medical Audits	=	$ 5.6 ± $ 1.0
Abstracting	$ 1.58	x	12,033,894	Discharges	=	$ 19.0 ± $ 2.4
Utilization Review Committee	$ 930	x	6,105	Delegated Hospitals	=	$ 5.7 ± $ 1.1
Direct Administration	$1,573	x	6,105	Delegated Hospitals	=	$ 9.6 ± $ 2.4
	Total (Excluding Donated Physician Time)					$113.5 ± $ 7.9

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 7.23	x	12,033,894	Discharges	=	$ 87.0 ± $ 8.4
Medical Audits	$ 209	x	32,660	Required Medical Audits	=	$ 6.8 ± $ 1.0
Abstracting	$ 1.58	x	12,033,894	Discharges	=	$ 19.0 ± $ 2.4
Utilization Review Committee	$1,780	x	6,105	Delegated Hospitals	=	$ 10.9 ± $ 1.2
Direct Administration	$1,589	x	6,105	Delegated Hospitals	=	$ 9.7 ± $ 2.2
	Total (Including Donated Physician Time)					$133.4 ± $12.1

1/ Unit costs are the same as for estimates in 5.1 and 5.3 because changing the number of patients reviewed in delegated status does not affect unit costs.

5.7 Estimated Cost Of PSRO UR For All Federal Inpatients With Full National Implementation, Based On Federal Reimbursement Guidelines, Assuming A Selected Sample Of 20 (Rather Than 100) Percent Of Federal Patients Are Targeted For Concurrent Review

Costs Shown	Excludes Donated Physician Time	Includes Donated Physician Time
PSRO Operating $7.11 x 13,370,993	$ 95,100,000 ± 22%	$ 95,100,000 ± 22%
Nondelegated Review 1/ $8.89 x 668,550 + Abs	$ 10,200,000 ± 29%	$ 10,200,000 ± 29%
Delegated Review See Table 5-VII for detail 2/	$ 46,400,000 ± 7%	$ 54,300,000 ± 6%
Total Cost	$151,700,000 ± 14%	$159,600,000 ± 14%

Total Cost 3/ = D(Uo) + .05 D(Und) + .20 D(Uab) .15 D(Ucr + Uab) + .60 D(Uab) + Ma(Uma) + H(Uc + Ua)

Change: Total federal discharges reviewed is reduced from 100 percent to 20 percent, with proportional reductions in the number of reviews in both nondelegated and delegated status.
.20 D(Uab), .60 D(Uab) are added to account for abstracting costs for patients who do not receive CR but for whom abstracts would still be completed (thus, 100 percent of federal patients are abstracted).

These estimates provide a basis of comparison to 5.1, if one were to assume that review of a sample of patients would be adopted in the PSRO program. Under this assumption, concurrent review is focused on only 20 percent of hospital admissions, whereas all other activities (e.g., abstracting, MCEs, UR committee, and direct administration) are continued at the same level. Continuation of all other activities at the same level is reasonable because abstracts on all federal patients would still be desirable, MCE covers all patients anyway, and changes in UR committee and direct administration would be small.

1/ Includes cost of abstracting for 25 percent of the total discharges (i.e., $1.58 x 2,674,018 = $4,224,948).

2/ Table 5-VII, following this page, identifies the unit costs used to build up the total costs shown here. By cutting out 80 percent of the CR activity while other activity remains the same, the average unit cost is reduced to $4.63.

3/ Units used are identified in the chart above and in Table 5-VII, following this page.

TABLE 5-VII

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.7

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost 1/	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 6.12	x	2,005,514	Discharges	=	$12.3 ± $1.2
Medical Audits	$ 171	x	32,660	Required Medical Audits	=	$ 5.6 ± $1.0
Abstracting	$ 1.58	x	10,027,570	Discharges	=	$15.8 ± $2.0
Utilization Review Committee	$ 930	x	5,087	Delegated Hospitals	=	$ 4.7 ± $0.9
Direct Administration	$1,573	x	5,087	Delegated Hospitals	=	$ 8.0 ± $2.0
	Total (Excluding Donated Physician Time)					$46.4 ± $3.4

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 7.23	x	2,005,514	Discharges	=	$14.5 ± $1.4
Medical Audits	$ 209	x	32,660	Required Medical Audits	=	$ 6.8 ± $1.0
Abstracting	$ 1.58	x	10,027,570	Discharges	=	$15.8 ± $2.0
Utilization Review Committee	$1,780	x	5,087	Delegated Hospitals	=	$ 9.1 ± $1.0
Direct Administration	$1,589	x	5,087	Delegated Hospitals	=	$ 8.1 ± $1.9
	Total (Including Donated Physician Time)					$54.3 ± $3.4

1/ Unit costs are the same as in 5.1. Only the volume of CR activity has been changed for this estimate.

5.8 Estimated Cost Of PSRO UR For All Federal Inpatients With Full National Implementation, Based On Federal Reimbursement Guidelines, Assuming That Extreme Data Points From The Study Are Removed From The Unit Cost Data Base

Costs Shown	Excludes Donated Physician Time	Includes Donated Physician Time
PSRO Operating $7.11 x 13,370,993	$ 95,100,000 ± 22%	$ 95,100,000 ± 22%
Nondelegated Review $8.89 x 3,342,523	$ 29,700,000 ± 29%	$ 29,700,000 ± 29%
Delegated Review See Table 5-VIII for detail 1/	$ 89,800,000 ± 7%	$105,700,000 ± 6%
Total Cost	$214,600,000 ± 11%	$230,500,000 ± 10%

Total Cost 2/ = D(Uo) + .25 D(Und) + .75 (U5cr + U5ab) + (Ma(U5ma) + H(U5c + U5a)

Change: U5cr, U5ab, U5ma, U5c, and U5a identify unit costs changed due to removal of seven hospitals from the data base that represent unusual extreme costs

Six hospitals in the sample of 90 delegated acute care facilities had very high unit costs that deviated from other hospitals in their respective areas (determined by Tukey's method). One non-PSRO UR hospital also had an extreme score. After inspection, it was discovered that each hospital had different peculiar circumstances that explained its unusually high cost for instance:

- One hospital was the only hospital in its area paying physicians for review, and a relatively large amount of physician time was paid.
- Another hospital had a low number of federal discharges, with a high-salaried head nurse performing CR functions.

1/ Table 5-VIII, following this page, identifies the unit costs used to build up the total costs shown here. The total unit cost per discharge for delegated review is $8.86 when the extreme hospitals are dropped out of the sample.

2/ Units used are identified in the chart above and in Table 5-VIII, following this page.

TABLE 5-VIII

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.8

N = 84 Hospitals

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost 1/	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 5.65	x	10,027,570	Discharges	=	$ 56.7 ± $5.0
Medical Audits	$ 179	x	32,660	Required Medical Audits	=	$ 5.8 ± $1.0
Abstracting	$ 1.50	x	10,027,570	Discharges	=	$ 15.0 ± $1.8
Utilization Review Committee	$ 884	x	5,087	Delegated Hospitals	=	$ 4.5 ± $0.9
Direct Administration	$1,526	x	5,087	Delegated Hospitals	=	$ 7.8 ± $2.1
	Total (Excluding Donated Physician Time)					$ 89.8 ± $5.9

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 6.67	x	10,027,570	Discharges	=	$ 66.9 ± $5.7
Medical Audits	$ 217	x	32,660	Required Medical Audits	=	$ 7.1 ± $1.0
Abstracting	$ 1.50	x	10,027,570	Discharges	=	$ 15.0 ± $9.8
Utilization Review Committee	$1,774	x	5,087	Delegated Hospitals	=	$ 9.0 ± $1.1
Direct Administration	$1,522	x	5,087	Delegated Hospitals	=	$ 7.7 ± $1.9
	Total (Including Donated Physician Time)					$105.7 ± $6.4

1/ All units are changed slightly due to a hospital base of 84 instead of 90.

- One hospital was heavily staffed for CR. It also had an extremely large nurse audit component with a low number of activities.

- A new proprietary hospital was very heavily staffed in UR for its size.

- Another hospital was part of a prepaid group practice, with a large volume of work required for central coordination.

- One hospital lost its delegation status during the month of the interview due to inefficiency in its UR operation.

- Finally, one hospital paid more than six times what other area hospitals paid for abstracting services.

Because both the PSRO and the fiscal intermediary have a responsibility to contain unwarranted or extreme expenditures for UR by delegated hospitals, these costs were removed from the data base for the purposes of this cost estimate (leaving a total N of 84 hospitals to determine the effect the high hospitals had on the overall estimates). As can be seen from the resultant total costs, removal of these cost figures reduced the overall cost estimates only slightly.

5.9 Estimated Costs Incurred For Utilization Review Under PSRO UR For All Federal Inpatients With Full National Implementation

Costs Shown	Excludes Donated Physician Time	Includes Donated Physician Time
PSRO Operating $7.11 x 13,370,993	$ 95,100,000 ± 22%	$ 95,100,000 ± 22%
Nondelegated Review $8.89 x 3,342,523	$ 29,700,000 ± 29%	$ 29,700,000 ± 29%
Delegated Review See Table 5-IX for detail 1/	$110,800,000 ± 6%	$140,600,000 ± 6%
Total Cost	$232,600,000 ± 10%	$265,400,000 ± 9%

Total Cost 2/ = D(Uo) + .25 D(Und) + .75 D(Ucr + Uab) + M6a(U6ma) + N6a(N6na) + H(U6c + U6a)

Change: M6a = The number of medical audits increases to actual instead of maximum allowable under reimbursement guidelines
U6ma = The cost of medical audits goes up when constraints on claimable physician hours are dropped
N6a = Number of nurse and other audits (currently not reimbursable)
U6na = Unit cost of nurse and other audits
U6c, U6a indicate changes in unit costs due to loss of restrictions on claimable physician time

Federal reimbursement guidelines control the cost of the program due to maximum allowable numbers of MCE's and physician hours claimable as well as by not including nurse and other audits in reimbursement. These cost estimates show projected costs with federal reimbursement constraints removed for comparison to 5.1. Thus, $232.6 million and $265.4 million, shown above, compare to $220.3 million and $237.1 million for the costs paid for federal patients versus those actually incurred. The difference in cost is accounted for by three major factors:

1/ Table 5-IX, following this page, identifies the unit costs used to build up the total costs shown here. The total unit cost per discharge for delegated review is $11.05 when reimbursement constraints are removed.

2/ Units used are identified in the chart above and in Table 5-IX, following this page.

TABLE 5-IX

DELEGATED REVIEW COST BUILD-UP FOR COST ESTIMATE 5.9

EXCLUDING DONATED PHYSICIAN TIME

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 6.12	x	10,027,570	Discharges	=	$ 61.4 ± $5.8
Medical Audits 1/	$ 171	x	59,161	Required Medical Audits	=	$ 10.1 ± $1.8
Nurse and Other Audits	$ 213	x	50,936	Nurse and Other Audits	=	$ 10.8 ± $2.1
Abstracting	$ 1.58	x	10,027,570	Discharges	=	$ 15.8 ± $2.0
Utilization Review Committee 2/	$ 930	x	5,087	Delegated Hospitals	=	$ 4.7 ± $0.9
Direct Administration 2/	$1,573	x	5,087	Delegated Hospitals	=	$ 8.0 ± $2.0
	Total (Excluding Donated Physician Time)					$110.8 ± $7.1

INCLUDING DONATED PHYSICIAN TIME

(Costed at $25.00/hour, and payment made for 90 percent of the claimable hours)

	Unit Cost	x	Number of Units	Unit Definition	=	Total Delegated Review Cost in Millions
Concurrent Review	$ 7.23	x	10,027,570	Discharges	=	$ 72.5 ± $7.0
Medical Audits 3/	$ 299	x	59,161	Required Medical Audits	=	$ 17.7 ± $2.1
Nurse and Other Audits	$ 214	x	50,936	Nurse and Other Audits	=	$ 10.9 ± $2.1
Abstracting	$ 1.58	x	10,027,570	Discharges	=	$ 15.8 ± $2.0
Utilization Review Committee 3/	$2,939	x	5,087	Delegated Hospitals	=	$ 15.0 ± $3.4
Direct Administration	$1,705	x	5,087	Delegated Hospitals	=	$ 8.7 ± $2.3
	Total (Including Donated Physician Time)					$140.6 ± $8.9

1/ Costs incurred equal reimbursable costs because no hospitals observed paid more than the number of claimable hours. This cost only reflects that proportion of the total MA cost that is equal to the proportion of federal discharges to all discharges. The number of units increased because the average number observed was greater than the number required.

2/ Costs reflect the proportion of total costs equal to the proportion of federal patients to the total patients covered.

3/ Large differences are observed in these unit costs due to removal of limitations on reimbursement for physician UR time.

- Almost all hospitals did more medical audits than required.

- When federal reimbursement guidelines are not used to restrict physician time, considerable additional costs are added due to the large number of physician hours involved in medical audits.

- Nurse and other audit costs are added. These are not currently funded but are covered under PSRO legislation, so it is expected that they eventually will be.

5.10 Estimated Cost Of PSRO UR For Federal Inpatients In Acute Care Hospitals With Full National Implementation, Based On The Relationship Of Gross Hospital UR Costs To Hospital Bed Size

A strong correlation was found between the gross cost of the PSRO UR program in sample hospitals and the hospital's bed size. Figure 5-X, following this page, presents a scattergram of the sample hospitals and shows how closely gross costs are predicted by hospital bed size. Using this methodology, the estimated gross cost of delegated PSRO UR in hospitals for federal patients is $127.4 million. This is close to the sum of the cost of delegated and nondelegated PSRO UR in 5.1 (i.e., $125.2 million). Thus, it appears that this estimation strategy confirms the cost build-up based on units of activity.

From visual inspection of the scattergram, it is apparent that there is a linear relationship between gross PSRO UR program costs and hospital bed size. The study team chose the following statistical model to describe the cost/bed size relationship:

Gross UR Program Cost = (cost per bed) (number of beds) + variance factor proportional to the number of beds

In other words, the predicted gross direct cost is given by a line with a slope equal to the cost per hospital bed passing through the origin, with a variance about the line proportional to the number of discharges. This model was chosen because, although the basic pattern is linear, it appears that the variance is greater in the larger sample hospitals. Also, a residual plot around the line does not indicate linear model failure.

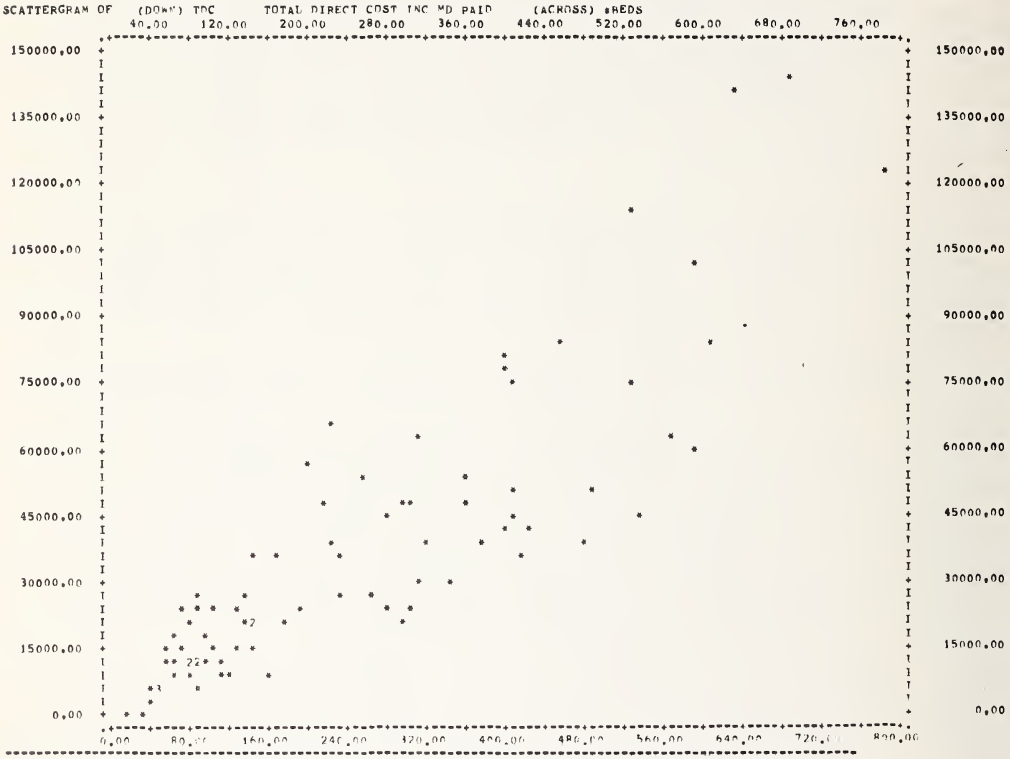
Estimation of the national gross direct cost of PSRO in-hospital UR can be made using this model. This finding may appear intuitively obvious. However, bed size correlates with gross costs more precisely than the number of patients reviewed or the number of discharges in sample hospitals.[1/]

1/ Bed size $r = .869$, explained variance = .755; patients reviewed $r = .742$, explained variance = .551; discharges $r = .834$, explained variance = .696.

TABLE 5-X

GROSS DIRECT COST OF PSRO INPATIENT
UR OBSERVED IN SAMPLE BY HOSPITAL BED SIZE

26-Sep-77



CORRELATION (R)=	0.86799	R SQUARED	=	0.75515	SIGNIFICANCE	=	0.00001
STD ERR OF EST =	15320.22450	INTERCEPT (A)	=	2389.53325	SLOPE (B)	=	145.17225
PLOTTED VALUES =	84	EXCLUDED VALUES=		0	MISSING VALUES	=	0

This indicates that bed size, which intuitively seems to be a poorer measure of UR activity than the number of patients covered, is a better predictor of gross program costs.

The sample hospitals had a total of 20,251 beds, and the model indicates that each additional bed is expected to add $145.17 to the gross UR program cost. Thus, because there were an estimated 1,125,225 beds in the acute care hospitals in the U.S. in 1976, gross UR costs, excluding PSRO operating costs (assuming 100 percent delegation), would have been approximately $163.3 million.

Because this cost figure includes all federal and nonfederal costs observed at sample hospitals, it must be adjusted to reflect federal only to be comparable to the sum of delegated and nondelegated review found in 5.1. Because 78 percent of patients covered were federal, the estimated federal cost is $127.4 million. This is relatively close to the sum of delegated and nondelegated costs shown in 5.1, thus, confirming the viability of both estimation strategies.

5.11 Total Manpower Needs In Full Time Equivalents By Personnel Category Required To Staff All Delegated Hospitals Nationally, Assuming 100 Percent Of Federal Patients Are Covered By Delegated Review

Concern has been expressed about the demand in terms of manpower that PSRO UR in delegated hospitals might create. The figures in Table 5-XI provide a gross estimate of the number of full time equivalents required nationally, assuming all hospitals perform delegated review at the levels required by federal reimbursement guidelines on federal patients. This manpower estimate assumes that nondelegated hospital manpower demands are similar to those of delegated hospitals. As a consequence, the figures shown (i.e., 15,000 people) should be interpreted as order of magnitude estimates of the manpower required to complete PSRO at the hospital level. Staffing of the 203 PSROs for their operating activities is not included in the estimate.

TABLE 5-XI

ESTIMATED MANPOWER NEEDS BY TYPE FOR IMPLEMENTATION OF DELEGATED PSRO UR IN ALL HOSPITALS NATIONWIDE 1/

	Paid Physician	Nurse	Review Coordinator	Audit Coordinator	Other	Total FTEs
Estimated Total FTEs Utilized for Federal Patients in 90 Sample Hospitals	2.64	12.99	111.54	21.75	50.48	199.40
Estimated Manpower Needs for PSRO UR in 6,783 Hospitals	199	979	8,406	1,639	3,805	15,028

1/ Confidence limits on these figures were not calculated separately. However, generally speaking, they would be similar to the limits shown on cost estimates in section 5.1 of this chapter (i.e., they might be expected to vary from 10 to 25 percent, depending on the category).

5.12 Estimated Cost Of Old UR For Inpatients In Acute Care Facilities During 1974

Costs Shown in Millions of Dollars	Excludes Donated Physician Time	Includes Donated Physician Time
Total Cost (6,783 hospitals) (Projected per hospital)	$50,100,000 ± 21%	$70,100,000 ± 17%
Total Cost (1,125,225 beds) (Projected per hospital bed)	$37,900,000 ± 17%	$54,900,000 ± 13%

These cost estimates of old UR are based on the average costs identified in the study sample of 113 acute care hospitals on a "per hospital" and on a "per hospital bed" basis. Because large variances were found in the costs incurred to meet old UR requirements (and, consequently, to perform UR activities), neither of these estimation methods is very precise, but the per bed projection is slightly better. In any case, the figures clearly indicate that, in comparison to the cost of PSRO UR (i.e., $220.3 million and $237.1 million, as shown in 5.1), substantial increases in costs and activities occurred between 1974 and 1976 as hospitals moved from old UR to PSRO UR.

6.0 ANALYSIS OF PSRO UR COSTS

6.0 ANALYSIS OF PSRO UR COSTS

Identification of hospital or UR program characteristics that are associated with and predictive of levels of PSRO UR expenditures and activities are of great interest in the evolution of PSRO program policy. Isolation of factors that influence program expenditures is the first step in analyzing the cost effectiveness of the PSRO program. Furthermore, delineation of any factors that tend to be predictive of UR costs should increase the precision of future PSRO program cost estimates. Chapter 6.0 discusses the relationship of UR program cost to hospital bed size, discharges, occupancy rate, teaching status, service level, ownership, area per capita income, staffing patterns, referral and denial rates, etc, observed in this study.

Specifically, the following topics are addressed in this chapter:

- Delegated hospital PSRO UR costs appear to be normally distributed, so standard parametric statistical analysis is appropriate for data analysis.
- Unit cost of PSRO UR is related to the proportion of the total hospital inpatient population for which UR is conducted, but no other significant relationships were found between cost and hospital characteristics.
- The total cost of the PSRO UR program can be predicted more accurately by the bed size of the hospital than by the number of patients reviewed.
- Nondelegated review appears to cost about the same as delegated review.
- Unit costs of UR per discharge varied among the nine PSRO sample areas, and UR is somewhat more expensive in the Eastern area of the United States.

- Hospitals in the two non-PSRO sample areas completed concurrent review, but their programs were less detailed and over 60 percent less expensive than PSRO UR.

- UR expenditures increased more than 300 percent between the old UR of 1974 and PSRO UR and over 200 percent from old UR to new UR under 1976 Medicare regulations.

In addition, an analysis of PSRO start-up and operating costs and comparison of costs in PSRO UR and non-PSRO areas in 1976 are discussed.

6.1 Delegated Hospital PSRO UR Costs Appear To Be Normally Distributed Among Sample Hospitals

The nature of the distribution of unit costs of UR identified at sample hospitals is of great importance because it affects sample size requirements for cost estimating and could potentially limit the types of statistical analysis that can be performed on the data collected. Initial sample selection for the study was based on the assumption that UR costs among hospitals would be normally distributed so that parametric statistical analysis, which requires a normal distribution, could be carried out. When data collection was complete, a histogram of hospitals, based on the unit cost of PSRO UR, was developed (See Figure 6-I, following this page) which shows a generally symmetric distribution of costs. The chi-square goodness of fit test indicates that the assumption of normality of the distribution of costs among hospitals was ($p < 0.10$, 8 degrees of freedom).

6.2 Unit Cost Of PSRO UR Was Related To The Proportion Of The Total Hospital Inpatient Population Reviewed, But No Other Relationships Were Identified

Extensive analysis of the data collected from hospitals was performed to determine what factors might influence or be predictive of the cost of a hospital's PSRO UR functions. Table 6-II, following Table 6-I, identifies the comparisons made and identifies the correlation coefficient found (i.e., the "r") and the probability level that this correlation would have occurred by

FIGURE 6-I

HISTOGRAM ILLUSTRATING CENTRAL TENDENCY
OF HOSPITAL UNIT COSTS FOR PSRO UR

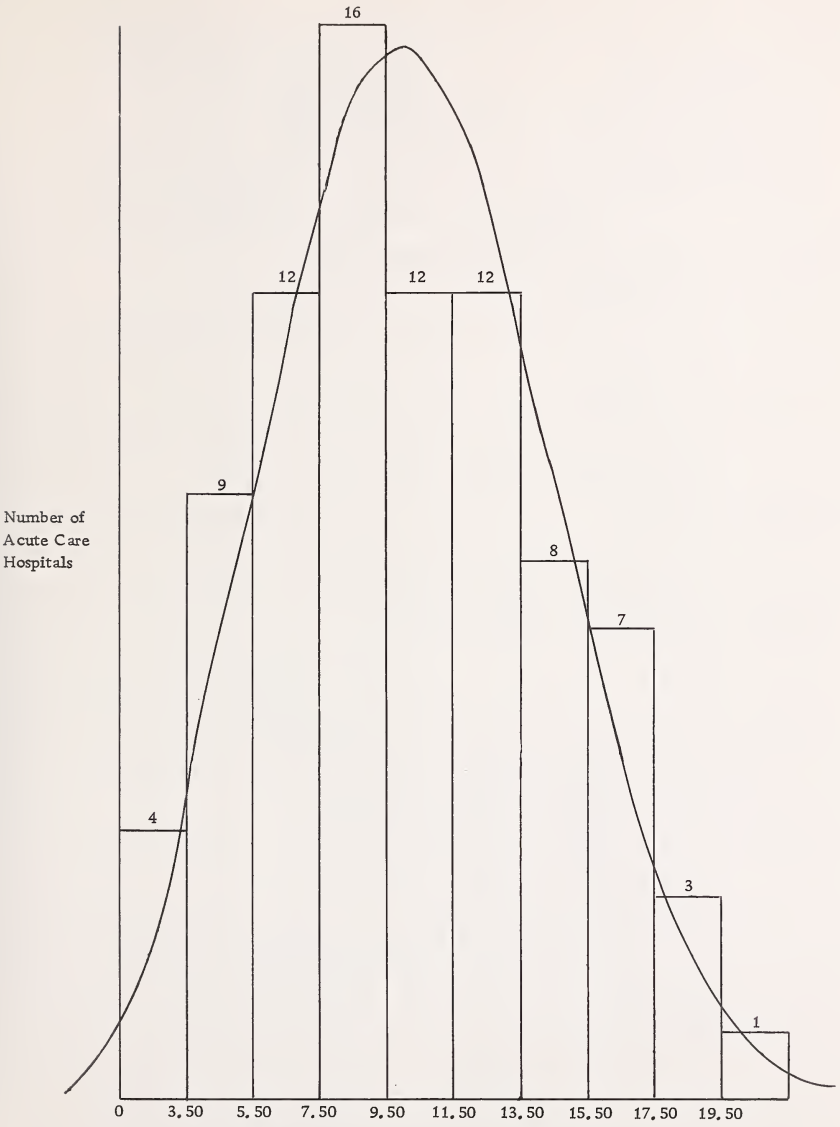


TABLE 6-II(1)

DATA ANALYSIS COMPLETED

KEY:
- AR = Admissions Review
- CR = Concurrent Review
- CSR = Continued Stay Review
- FLOS = Federal Length of Stay
- FTE = Full-Time Equivalent
- N = Number of hospitals
- NFLOS = Nonfederal Length of Stay
- p = probability that the coefficient could have occurred by chance
- r = correlation coefficient
- RC = Review Coordinator
- SD = Standard Deviation
- UT = Unit total cost per discharge for all PSRO UR functions

1. GROSS COST PER HOSPITAL REVIEW PROGRAM GRAPHED AGAINST:

   (1) Acute care bed size of hospital
   r = .87; p = .00001

   (2) Number of discharges
   r = .83; p = .00001

   (3) Number of covered discharges
   r = .74; p = .00001

   (4) Number of inpatient days covered by review
   r = .73; p = .00001

   (5) Hospital occupancy rate
   r = .50; p = .00001

   (6) Percent RC FTE's of total FTE's for CR and abstracting only
   r = .42; p = .00002

   (7) Percent of total discharges covered by the review program
   r = .05; p = .34

   (8) Percent of discharges covered under the review program who receive CSR
   r = .18; p = .05

   (9) Referrals to the physician advisor per 1,000 discharges reviewed for AR
   AR: r = -.10; p = .18

   (10) Denials made per 1,000 discharges reviewed for AR and CSR
   AR: r = .15; p = .09 CSR: r = .20; p = .03

   (11) CR FTE's per 1,000 discharges reviewed
   r = -.07; p = .27

   (12) All personnel FTE's per 1,000 discharges reviewed
   r = -.09; p = .20

   (13) Cost of review as a percent of total acute care costs for covered patients
   r = -.02; p = .45

   (14) Percent change in FLOS
   FLOS: r = -.03; p = .40

2. UNIT COST OF CR AND UNIT TOTAL REVIEW COST PER DISCHARGE GRAPHED AGAINST: 1/

(1) CR FTE's per 1,000 discharges reviewed
CR: r =.93; p=.00001 UT: r =.79; p =.00001

(2) All personnel FTE's per 1,000 discharges reviewed
CR: r = .77; p = .00001 UT: r = .84; p = .00001

(3) Cost of review program as a percent of total acute care costs for covered patients
CR: r =.55; p =.00001 UT: r =.57; p =-.00001

(4) Percent of total discharges covered by the review program
CR: r = -.52; p = .0001 UT: r = -.63; p = .00001

(5) Percent of discharges covered under the review program who receive CSR
CR: r = .38; p = .0006 UT: r = .10; p = .18

(6) Percent of federal discharges (or federal occupancy rate)
UT: r = -.37; p = .0002

(7) Number of covered discharges
UT: r = .35; p = .0005

(8) LOS for F patients and NF patients
CR: FLOS: r =.34; p = .0007 NFLOS: r = .15; p = .09
UT: FLOS: r = .26; p = .007 NFLOS: r = .06; p = .28

(9) Hospital occupancy rate
CR: r = -.25; p = .008 UT: r = .15; p = .08

(10) Percent change in FLOS and percent change in NFLOS
CR: FLOS: r = .17; p = .07 NFLOS: r = .06; p = .29
UT: NFLOS: r = .01; p = .47

(11) Number of discharges
UT: r = -.15; p = .08

(12) Covered inpatient days
UT: r = .07; p = .45

(13) Referrals to the physician advisor per 1,000 discharges reviewed for AR and CSR
CR: AR: r = .07; p = .26 CSR: r = .18; p = .05
UT: AR: r = .03; p = .39 CSR: r = .04; p = .36

(14) Denials made per 1,000 discharges reviewed for AR and CSR
CR: AR: r = .08; p = .23 CSR: r = .16; p = .07
UT: AR: r = .01; p = .48 CSR: r = .01; p = .47

3. BED SIZE GRAPHED AGAINST:

(1) Number of federal discharges
r = .93; p = .00001

(2) Total FTE's
r = .84; p = .00001

(3) Hospital occupancy rate
r = .51; p = .00001

(4) Gross old UR costs per hospital
r = .48; p = .00001

1/ In certain cases UT or CR units were both not calculated since they generally came out very close together. In such cases the figure calculated is shown.

(5) Percent RC FTE's of total FTE's for CR and abstracting only
r = .33; p = .0007

(6) Indirect cost rate
r = .29; p = .004

(7) Percent of federal discharges (or federal occupancy rate)
r = -.22; p = .02

(8) Percent change in FLOS and NFLOS
FLOS: r = .01; p = .47 NFLOS: r = .22; p = .02

(9) Unit cost of CR and total cost per discharge
CR: r = -.03; p = .36 UT: r = .04; p = .35

(10) Percent of total discharges covered by the review program
r = -.06; p = .29

(11) Percent of discharges covered under the review program who receive CSR
r = .06; p = .30

(12) Referrals to the physician advisor per 1,000 discharges reviewed for AR and CSR
AR: r = -.14; p = .11 CSR: r = .14; p = .11

(13) Denials made per 1,000 discharges reviewed for AR and CSR
AR: r = .10; p = .19 CSR: r = .14; p = .11

(14) CR FTE's per 1,000 discharges reviewed
r = -.16; p = .07

(15) All personnel FTE's per 1,000 discharges reviewed
r = -.19; p = .04

(16) Cost of the review program as a percent of total acute care costs for covered patients
r = -.11; p = .12

(17) Unit old UR costs per federal discharge
r = -.14; p = .10

4. TOTAL FTE'S IN THE PSRO UR PROGRAM GRAPHED AGAINST:

(1) Number of discharges covered by the program
r = .76; p = .00001

(2) Number of discharges in the hospital
r = .80; p = .00001

(3) Occupancy rate of the hospital
r = .50; p = .0001

5. COST OF REVIEW PROGRAM AS A PERCENT OF TOTAL ACUTE CARE COSTS FOR ALL COVERED PATIENTS GRAPHED AGAINST:

(1) Referrals to the physician advisor per 1,000 discharges reviewed for AR and CSR
AR: r = .06; p = .30 CSR: r = .23; p = .02

(2) Denials made per 1,000 discharges reviewed for AR and CSR
AR: r - .05; p = .34 CSR: r = .09; p = .22

(3) Percent of all hospital discharges covered by the review program
r = -.37; p = .0004

(4) Unit old UR costs per federal discharge
r = .25; p = .02

(5) Gross old UR costs per hospital
r = -.01; p = .45

6. HOSPITAL OCCUPANCY RATE GRAPHED AGAINST:

(1) LOS in 1976
r = .56; p = .00001

(2) Percent RC FTE's of total FTE's for the total of CR and abstracting
r = -.30; p = .002

(3) CR FTE's per 1,000 discharges reviewed
r = -.33; p = .0007

(4) All personnel FTE's per 1,000 discharges reviewed
r = -.24; p = .01

(5) Percent change in FLOS NFLOS
FLOS: r = .08; p = .21 NFLOS: r = .26; p = .009

(6) Referrals to physician advisor per 1,000 discharges reviewed for AR and CSR
AR: r = -.10; p = .04 CSR: r = .00; p = .21

(7) Denials made per 1,000 discharges reviewed for AR and CSR
AR: r = .03; p = .38 CSR: r = .10; p = .19

(8) LOS in 1974 (occupancy rate in 1974)
r = .46; p = .00001

7. PER CAPITA INCOME OF COUNTY IN WHICH HOSPITAL IS LOCATED GRAPHED AGAINST:

(1) Bed size (in acute care beds)
r = .36; p = .0003

(2) Number of discharges
r = .32; p = .001

(3) Percent of federal discharges (or federal occupancy rate)
r = -.31; p = .002

(4) Hospital occupancy rate
r = .29; p = .003

(5) Number of discharges
r = .29; p = .002

(6) Percent of discharges covered under the review program who receive CSR
r = .28; p = .006

(7) Gross cost per hospital review program
r = .29; p = .003

(8) Unit cost of CR and unit total cost per discharge
CR: r = .26; p = .009 UT: r = .31; p = .001

(9) All personnel FTE's per 1,000 discharges reviewed
r = .26; p = .009

(10) Cost of the review program as a percent of total acute care costs for covered patients
$r = -.24$; $p = .03$

(11) Total FTE's
$r = .24$; $p = .01$

(12) Unit old UR costs per federal discharge
$r = .04$; $p = .36$

(13) Gross old UR costs per hospital
$r = .12$; $p = .13$

(14) Referrals to the physician advisor per 1,000 discharges reviewed for AR and CSR
AR: $r = -.16$; $p = .07$ CSR: $r = -.03$; $p = .41$

(15) Denials made per 1,000 discharges reviewed for AR and CSR
AR: $r = -.14$; $p = .11$ CSR: $r = -.09$; $p = .22$

(16) CR FTE's per 1,000 discharges reviewed
$r = .13$; $p = .11$

(17) Percent change in FLOS and NFLOS
FLOS: $r = -.14$; $p = .11$ NFLOS: $r = .04$; $p = .38$

(18) Percent of total discharges covered by the review program
$r = -.11$; $p = .16$

8. UNIT COST OF OLD UR (1974) PER FEDERAL DISCHARGE GRAPHED AGAINST:

(1) Number of federal discharges
$r = -.24$; $p = .02$

(2) Number of discharges
$r = -.20$; $p = .04$

(3) CR unit cost (1976 PSRO UR)
$r = .13$; $p = .13$

(4) UT unit cost (1976 PSRO UR)
$r = .33$; $p = .001$

(5) Total UR cost (1976, PSRO UR)
$r = .05$; $p = .32$

(6) Number of beds
$r = -.19$; $p = .05$

9. GROSS HOSPITAL OLD UR COST IN 1974 GRAPHED AGAINST:

(1) Number of beds
$r = .45$; $p = .00001$

(2) Number of discharges
$r = .38$; $p = .00002$

(3) Number of federal discharges
$r = .43$; $p = .005$

(4) Hospital's county per capita income
$r = .12$; $p = .13$

(5) Occupancy rate in 1974
$r = .29$; $p = .005$

TABLE 6-II(6)

Several variables studied provided data that was not continuous so the appropriate analytical approach was to use tables. Key comparison tables are presented below.

	N	Mean Total Cost Per Discharge Cost	Mean Total Cost Per Discharge SD	Mean CR Cost Per Discharge Cost	Mean CR Cost Per Discharge SD
1. TEACHING STATUS:					
(1) Nonteaching	71	$ 9.94	$4.43	$ 5.59	$ 2.65
(2) Teaching	13	$11.09	$ 4.82	$ 5.98	$ 3.65
2. TEACHING STATUS FOR HOSPITALS OVER 200 BEDS:					
(1) Nonteaching	30	$ 10.17	$ 4.98	$5.88	$ 2.90
(2) Teaching	12	$11.28	$ 4.98	$ 6.11	$ 3.78
3. SERVICE LEVEL:					
(1) No special services	39	$ 10.14	$ 4.33	$ 5.42	$ 2.61
(2) Radioisotope therapy	9	$ 10.45	$ 5.45	$ 6.04	$ 2.89
(3) Cobalt therapy	18	$ 10.17	$ 5.07	$ 5.90	$ 3.05
(4) Psychiatric inpatient	18	$ 9.88	$ 4.04	$ 5.70	$ 3.29
4. FINANCIAL STATUS					
(1) Not for profit	81	$ 10.21	$ 4.53	$ 5.66	$ 2.84
(2) For profit	3 (too few)	$ 7.73	$ 1.86	$ 5.21	$ 1.85

chance. A number of the weak correlations presented in the table may be of interest to individuals considering multivariate analysis for future cost studies.

As in most other parts of this report, analysis was performed on costs observed as well as on costs including the estimated value of currently donated physician time. Almost without exception, the addition of costs for donated physician time lowered the correlation coefficient. Because the key factor of interest is the types of possible relationships found, the table reports only the costs observed (i.e., paid physician time is included in the correlation calculations but not the estimated value of donated physician time).

Most of the high correlations observed in Table 6-II should be expected on the basis of empirical observation. For instance:

- Total review program cost is strongly correlated with hospital size ($r = .87$), the number of discharges ($r = .83$), the number of discharges reviewed ($r = .74$), and the number of inpatient days covered by review ($r = .73$).
- Unit cost per discharge reviewed is correlated with the number of UR FTEs per 1,000 discharges ($r = .84$, and $r = .93$ for CR only)
- Bed size and the number of discharges ($r = .93$) are highly correlated and so are bed size and total UR FTEs employed ($r = .84$).
- Total UR FTEs used in the PSRO UR program are also strongly correlated with the number of discharges in the hospital ($r = .80$) and the number of discharges covered by review ($r = .76$).

From these data, it is apparent that hospital size has the highest correlation to UR program cost and total UR FTEs used, even though the number of discharges reviewed intuitively would seem to be a better predictor of UR cost. This observation is discussed in greater detail in section 6.3.

A correlation of some interest was that the percent of total discharges covered by the review program is negatively related to the overall unit cost ($r = -.63$) and to the unit cost of CR ($r = -.52$). This is important because it indicates that economies of scale are achieved as review program coverage approaches 100 percent of inpatients. Thus, if national health insurance were to be implemented with PSRO UR review for all patients, unit cost savings could be expected. Correlation analysis indicates that the UR cost per discharge in any single hospital would be predicted using the following equation:

Cost Per Discharge Of Review = \$15.21 - \$10.14 x The Percent Of Discharges Covered

Using this equation, UR costs per discharge would be approximately \$5.00 for 100 percent coverage of discharges. The cost predicted for sample hospitals is about \$11.00 compared to the \$9.52 level actually observed.

Economies of scale, as well as the possibility that nonfederal patients are less expensive to review, probably account for the predicted savings. Data from sample hospitals indicated that federal patients generally receive about 50 percent more review encounters than nonfederal patients. In addition, many review coordinators said that multiple diagnoses and diagnoses characteristic of older age groups, such as are included on this Medicare and Medicaid programs, tend to require more time. As a consequence, it appears that federal patients may cost more to review.

Another interesting weak correlation identified was that the average length of stay in 1976 for all patients at sample hospitals is related to hospital occupancy rate ($r = .56$). This highlights the fact that a program designed at least in part to impact on hospital patient lengths of stay, such as the PSRO program, may cause a reduction in hospital occupancy rates. In underbedded areas, this would result in savings to the Federal government plus greater accessibility to hospital care for all patients. However, in overbedded areas, the empty beds are unlikely to be filled, so hospital overhead is likely to rise and cost reductions will be limited unless bed capacity is reduced.

Per capita income in the county in which the hospital is located was found to have little relationship to PSRO UR cost. The strongest relationship identified was between per capita income and hospital bed size ($r = .36$). This only confirms that larger hospitals tend to be located in wealthier, more heavily populated areas. To the extent that area per capita income can be accepted as a proxy for the prevailing wage levels, it appears that wage levels have less to do with UR costs than other, unidentifiable factors.

No relationships were identified between unit costs and hospital teaching status (teaching and non-teaching), hospital service level (provision of selected special services), and hospital ownership (voluntary, government, and proprietary).

6.3 The Total Cost Of The PSRO UR Program Can Be Predicted More Accurately By The Bed Size Of The Hospital Than By The Number Of Patients Reviewed By The Program

The correlations identified between total PSRO UR program costs and selected hospital characteristics were:

- .87 for bed size; explained variance = 76 percent; and the probability that this relationship occurred by chance is 1 in 100,000
- .83 for total hospital discharges; explained variance = 70 percent; and the probability this relationship occurred by chance is 1 in 100,000
- .74 for total discharges actually reviewed; explained variance = 55 percent; and the possibility this relationship occurred by chance is also 1 in 100,000

This indicates that the size of the hospital is a better predictor of UR program costs than the number of patients reviewed. Furthermore, the number of discharges (which could be used to control for occupancy rate variations among hospitals) is a somewhat weaker predictor of program cost than bed size. Thus, hospital staffing for the UR program in sample hospitals was more keyed to

the hospital's size than to the number of patients reviewed. The national cost estimate discussed in section 5.10 of this report presents estimates of national UR costs based on this relationship of bed size to total UR program cost.

6.4 Nondelegated Review Appears To Cost About The Same As Delegated Review Based On The Unit Cost Per Discharge Reviewed

Based on data from the sample of hospitals and PSROs used on this study, the cost of delegated review in 1976 was $11.20 per discharge reviewed ($9.52 excluding donated physician time), whereas the cost of nondelegated review was $8.89. Direct comparison of these two figures is not warranted since they include different sets of UR activities. For instance, the nondelegated review costs include concurrent review and abstracting while delegated review covers, in addition, medical audits, hospital UR committee activities, and direct hospital UR administration. When adjustments are made in the costs so that they cover approximately equal activities, we find that delegated activity costs $8.81 versus $8.89 for nondelegated review. Thus, it appears that the costs are almost equal. Table 6-III, following this page, summarizes this analysis. Because nondelegated costs include the cost of review physicians, the appropriate unit costs include the estimated value of donated physician time in the table.

To satisfy our curiosity about the possible impact of differences in the level of operating costs between delegated and nondelegated PSROs, unit costs were developed for each type (see Table 6-III). Only $.12 per discharge difference is apparent between the costs of the two different PSRO UR operating functions. Adding PSRO operating costs to the hospital UR costs does not, therefore, materially affect the cost comparison between delegated and nondelegated review.

TABLE 6-III

COMPARISON OF THE UNIT COST OF NONDELEGATED
WITH THE UNIT COST OF DELEGATED REVIEW

	Unit Cost Per Discharge*	PSRO Operating Cost Per Discharge	Total Unit Cost Per Discharge
Nondelegated Review	$ 8.89	$ 7.20 (Nondelegated only)	$ 16.09
Delegated Review:			
CR + Abstracting	$ 8.81 ($ 7.70)	$ 7.08 (Delegated only)	$ 15.89 ($ 14.48)
Total (No Adjustments)	11.20 (9.52)	7.11 (All sample PSROs)	18.31 (16.63)

Note: * Costs excluding donated physician time are shown in parentheses.

6.5 Unit Costs For Each PSRO UR Activity Varied Considerably Among The Nine Predominantly Delegated PSRO Areas Studied, And It Appears That PSROs In The Eastern United States Are More Expensive

Table 6-IV, following this page, presents the mean costs of review among the nine predominantly delegated PSRO areas, based on federal reimbursement guidelines. For comparison purposes, non-PSRO "new" UR costs are also shown based on costs incurred for federal patients.

Table 6-IV-P, following Table 6-IV, shows the same unit costs with the estimated value of currently donated physician time added.[1/] Although the costs including donated physician time are higher, they have little impact on the relationship of costs observed among PSROs. As a consequence, discussion will be directed toward Table 6-IV, which excludes donated physician time, although, for the most part, the discussion is pertinent to Table 6-IV-P as well.

Comparing the cost of concurrent review (which accounts for 60 percent of total UR costs) among the sample predominantly delegated PSROs, high and low cost extremes were found in the two smallest areas. The lowest mean cost per discharge was found in Area 8, where only four hospitals were sampled. In part, the reason for the relatively low cost observed is that a relatively high proportion of patients (federal and nonfederal) were reviewed in this area. The strong correlation found between the proportion of patients reviewed and the costs of review activity has been previously discussed, with lower unit costs resulting as the proportion of patients reviewed increases. In area 8, half of the hospitals reviewed all patients and the other half reviewed more than just federal patients.

The highest unit cost of concurrent review was found in Area 7, where five hospitals were sampled. Possible explanations for the relatively high costs include the following:

1/ For PSRO, 90 percent of physician hours claimable under federal reimbursement guidelines (whether currently paid or donated) are charged at $25 per hour, the current average national physician hourly income. For new UR, the same procedures are followed except that federal reimbursement guidelines (which apply only to PSRO UR) are not used.

TABLE 6-IV

COMPARISON OF UNIT COSTS AMONG SAMPLE AREAS
(Excludes Donated Physician Time and All PSRO Costs Are Based on Federal Reimbursement Guidelines)

		Cost of Review Activities, Including 90 Percent Confidence Intervals					
		Concurrent Review	Medical Audits	Abstracting	Utilization Review Committee	Direct Administration	Cost Per Discharge
Mean of 9 Sample Areas		$ 6.44 ± $ 0.75	$ 186 ± $ 30	$ 1.48 ± $ 0.15	$ 1,022 ± $ 118	$ 1,607 ± $ 218	$ 9.86 ± $ 0.78
Mean of 90 PSRO Hospitals		$ 6.12 ± $ 0.58	$ 171 ± $ 30	$ 1.58 ± $ 0.20	$ 930 ± $ 177	$ 1,573 ± $ 390	$ 9.52 ± $ 0.66
Range of Area Mean Costs		$ 3.57 to $ 10.23	$ 100 to $ 221	$ 0.60 to $ 2.19	$ 318 to $ 1,539	$ 459 to $ 2,355	
Area Number:	1	$ 5.05 ± $ 1.07	$ 221 ± $ 84.47	$ 2.19 ± $ 0.64	$ 318 ± $274.27	$ 2,355 ± $ 1,403.46	
	2	5.14 ± 1.12	171 ± 51.44	1.08 ± 0.28	1,040 ± 295.48	1,352 ± 283.30	
	5	6.78 ± 1.36	120 ± 29.38	1.69 ± 0.46	961 ± 407.26	1,981 ± 997.14	
	6	6.09 ± 0.48	154 ± 60.35	1.62 ± 0.20	913 ± 265.79	1,259 ± 523.34	
	7	10.23 ± 1.16	219 ± 68.01	1.79 ± 0.51	1,478 ± 478.57	1,809 ± 1,174.79	
	8	3.57 ± 0.81	170 ± 69.71	0.60 ± 0.16	1,038 ± 488.60	2,077 ± 834.83	
	9	5.35 ± 0.90	100 ± 27.24	1.45 ± 0.26	950 ± 645.89	459 ± 206.67	
	11	5.73 ± 1.44	119 ± 46.12	1.68 ± 0.49	966 ± 433.15	893 ± 736.78	
	12	9.98 ± 0.84	402 ± 43.42	1.22 ± 0.17	1,539 ± 198.66	2,279 ± 892.98	
Non-PSRO Areas:	13	4.49 ± 1.58	138 ± 82.00*	0.32 ± 0.34	--	1,995 ± 1,182.00	
	14	3.06 ± 0.72	237 ± 115.00	0.94 ± 1.19	991 ± 800.00	--	
Mean of 23 Non-PSRO Hospitals		$ 3.62 ± $ 0.78	$ 195 ± $ 0.76	$ 0.70 ± $ 0.73	$ 566 ± $ 483	$ 855 ± $ 609	

TABLE 6-IV-P

COMPARISON OF UNIT COSTS AMONG SAMPLE AREAS
(Includes Donated Physician Time and All PSRO Costs Are Based on Federal Reimbursement Guidelines)

		Cost of Review Activities, Including 90 Percent Confidence Intervals					
		Concurrent Review	Medical Audits	Abstracting	Utilization Review Committee	Direct Administration	Cost Per Discharge
Mean of 9 Sample Areas		$ 7.31 ± $ 0.73	$ 223 ± $ 30	$ 1.48 ± $ 0.15	$ 1,812 ± $ 188	$ 1,632 ± $ 222	$ 11.26 ± $ 0.77
Mean of 90 PSRO Hospitals		$ 7.23 ± $ 0.70	$ 209 ± $ 30	$ 1.58 ± $ 0.20	$ 1,780 ± $ 199	$ 1,589 ± $ 366	$ 11.20 ± $ 0.77
Range of Area Mean Costs		$ 3.88 to $ 10.89	$ 149 to $ 444	$ 0.60 to $ 2.19	$ 999 to $ 3,010	$ 459 to $ 2,279	
Area Number:	1	$ 6.85 ± $ 1.16	$ 263 ± $ 85.91	$ 2.19 ± $ 0.64	$ 1,757 ± $505.19	$ 2,442 ± $ 1,168.24	
	4	6.01 ± 1.16	210 ± 53.52	1.08 ± 0.28	1,704 ± 316.83	1,516 ± 368.90	
	5	7.47 ± 1.39	159 ± 30.54	1.69 ± 0.46	1,628 ± 455.46	1,981 ± 997.14	
	6	7.71 ± 0.84	193 ± 62.15	1.62 ± 0.20	1,932 ± 375.37	1,259 ± 523.34	
	7	10.89 ± 1.62	227 ± 71.49	1.79 ± 0.51	2,208 ± 616.04	1,809 ± 1,174.79	
	8	3.88 ± 0.87	210 ± 70.72	0.60 ± 0.16	1,320 ± 258.99	2,077 ± 834.83	
	9	5.40 ± 0.87	149 ± 31.08	1.45 ± 0.26	999 ± 301.07	459 ± 206.67	
	11	7.52 ± 2.24	153 ± 45.49	1.68 ± 0.49	1,751 ± 293.07	866 ± 715.17	
	12	10.09 ± 1.00	444 ± 42.80	1.22 ± 0.17	3,010 ± 192.67	2,279 ± 892.98	
Non-PSRO Areas:	13	5.48 ± 1.45	207 ± 96.00	0.32 ± 0.34	--	2,258 ± 1,268.00	
	14	3.48 ± 0.89	313 ± 111.00	0.94 ± 1.19	1,953 ±1,063.00	--	
Mean of 23 Non-PSRO Hospitals		$ 4.26 ± $ 0.84	$ 269 ± $ 0.77	$ 0.70 ± $ 0.73	$ 1,189 ± $ 589	$ 903 ± $ 640	

- A relatively low percentage of patients were reviewed--Three hospitals out of the five-hospital sample reviewed only federal patients, whereas the other two hospitals reviewed only a small fraction of nonfederal patients.

- One of the hospitals had an extremely high cost per discharge--Because the number of sample hospitals in this area was small, this cost inflated the mean for the area substantially.

A dramatic difference exists between UR costs in PSROs in the Eastern United States and elsewhere. Eastern PSROs appear to be more expensive (Eastern average CR = $9.00; S.D. = $2.46; all other areas average CR = $5.15, S.D. = $.79). This conclusion must be tempered by the fact that local characteristics may tend to bias the unit cost data among PSRO areas. This finding of high costs in Eastern PSROs is particularly interesting because only one of the three Eastern PSRO areas could be defined as metropolitan, whereas the other two PSRO areas are characterized by low population density and generally low costs of living. Even though few nonfederal patients were reviewed in these areas compared to other areas, the difference in cost is too great to be explained by possible savings elsewhere due to review of nonfederal patients.

6.6 Non-PSRO Area Hospitals Completed Concurrent Review, But Their Programs Were Less Detailed And Over 60 Percent Less Expensive Than PSRO UR

To make a fair comparison of the cost of current new UR with the cost of PSRO delegated review, observations of each type of activity must be made in similar hospitals in similar areas. For this reason, two non-PSRO areas were matched with two similar PSRO areas for the purpose of cost comparisons. Non-PSRO Area 13 was coupled with PSRO area 1 (Southern), and non-PSRO Area 14 was coupled with PSRO Area 11 (Central). Table 6-V, on the following page, compares demographics in the two matches.

TABLE 6-V

COMPARISON OF SAMPLE HOSPITALS IN
TWO MATCHED NON-PSRO AND PSRO AREAS

Demographic Characteristics	Southern Area		Central Area	
	Non-PSRO Area 13	PSRO Area 1	Non-PSRO Area 14	PSRO Area 11
Georgraphic Size (nearest 10,000 sq. mi.)	80,000	50,000	75,000	120,000
Number of Counties (intervals of 5)	75-80	80-85	90-95	30-35
Total Population (1974 census to nearest 5%)	4,800,000	2,300,000	1,500,000	1,100,000
Population Over 65 (1970 census to nearest 5%)	10%	10%	10%	30%
Rural Population (1970 census to nearest 5%)	40%	50%	40%	10%
Personal Income Per Capita (1970 census to nearest $100)	$2,300	$1,900	$2,800	$2,500
AFDC Population (per 100,000 pop.) (1975 data to nearest 1,000)	7,000	8,000	2,500	3,000
Active Physicians (per 100,000 pop.) (1973 data to nearest 50)	100	80	113	100
Active Physicians (per $100,000 income in area) (1973 data to nearest .01)	.05	.04	.04	.05
Region of United States	Southern	Southern	Central	Central

The PSRO and non-PSRO areas in the Southern match:

- Have a similar proportion of population over the age of 65
- Have approximately the same proportion of the population living in rural areas

The two Southern areas differ slightly in that Area 1 has a lower per capita income and has fewer active physicians per unit of population and income than does Area 13.

The central areas have similar population densities (less than 20 people per square mile) and numbers of active physicians per unit of population and per unit of income in the area. The two Central areas appear to be dissimilar in:

- Percent of the total population over 65 years old
- Percentage of people located in rural areas

Although the percentage of rural population is quite different between the Central areas, it should be noted that a large portion of the population in Area 11 lives in widely dispersed small cities and towns, so the areas are really more alike than the data may indicate.

There is no significant difference in the mix of hospital characteristics among sample hospitals in the two matches. Table 6-VI, following this page, compares sample hospitals in the two matched areas for three variables:

- Teaching status (teaching and non-teaching)
- Level of service (as defined by the presence/absence of cobalt therapy, radioisotope therapy, psychiatric inpatient units)
- Bed size (by 100's of beds)

The greatest percentage difference across all variables in the Southern area is 8 percent (cobalt therapy) and in the Central area 18 percent (bed size 0-99 beds). Overall, areas in the two matches appear to be quite similar.

TABLE 6-VI

COMPARISON OF SAMPLE HOSPITAL CHARACTERISTICS
IN THE TWO MATCHED NON-PSRO AND PSRO AREAS

Sample Hospital Characteristics	Percent Of The Sample			
	Southern		Central	
	Non-PSRO Area 13	PSRO Area 1	Non-PSRO Area 14	PSRO Area 11
1. Teaching Status:				
Teaching	22%	17%	15%	7%
Nonteaching	78%	83%	85%	93%
2. Level of Service:				
Cobalt Therapy	44%	36%	31%	29%
Radioisotope Therapy	44%	50%	31%	21%
Psychiatric Inpatient Unit	33%	36%	15%	14%
3. Bed Size:				
0 - 99	33%	29%	54%	72%
100 - 199	22%	29%	8%	0
200 - 299	11%	7%	15%	21%
300 - 399	11%	7%	8%	0
400 or more	22%	29%	15%	7%

Table 6-VII, following this page, compares UR unit costs in the two matched areas, and Table 6-VII-P, following Table 6-VII, does the same, including the estimated cost of physician donated time. In each match, the average cost per discharge is higher in the PSRO area as compared to the non-PSRO area:

- 61 percent higher when all physician time is costed at the hospital level and 195 percent when PSRO operating costs are included
- 51 percent when no costs for donated physician time at the hospital level are included and 212 percent when PSRO operating costs are included

In both matched pairs, CR represented the largest portion of the in-hospital UR costs. However, CR represents a higher proportion of total UR cost in the non-PSRO areas because new UR usually involves less hospital support effort than PSRO UR. For the most part, every function in PSRO UR tends to cost more than the analogous functions do for new UR. When the additional expense of PSRO operation is added to the hospital costs, overall UR costs are dramatically higher.

All hospitals in both PSRO and non-PSRO areas were conducting medical audits (MA) because they are required by the Joint Commission on Accreditation of Hospitals. Both PSRO and non-PSRO areas appear to commit about the same resources to medical audits, indicating perhaps that PSRO efforts may not have significantly affected the amount of audit activity.

Abstracting costs in the PSRO areas were more than 300 percent higher than in non-PSRO areas. A number of factors may account for this difference in abstracting costs:

TABLE 6-VII

COMPARISON OF UNIT COSTS IN TWO MATCHED NON-PSRO AND PSRO AREAS 1/
(Includes cost of only paid physician time)

Review Activity 3/	Southern Match			Central Match			Average Percent Change
	Non-PSRO Area 13	PSRO Area 1	Percent Difference 2/	Non-PSRO Area 14	PSRO Area 11	Percent Difference 2/	
Total Hospital Cost Per Discharge	$ 6.11	$ 8.42	38%	$ 5.03	$ 8.19	63%	51%
Total Cost Per Discharge, Including PSRO Operating 4/	$ 6.11	$ 12.25	100%	$ 5.03	$ 21.28	323%	212%
Concurrent Review	$ 4.49	$ 5.05	12%	$ 3.06	$ 5.73	87%	50%
Medical Audits	$ 138.00	$ 221.00	60%	$ 237.00	$ 119.00	- 50%	5%
Nurse and Other Audits	$ 134.00	$ NA	NA	$ 228.00	NA	NA	NA
Abstracting	$ 0.32	$ 2.19	584%	$ 0.94	$ 1.68	79%	332%
UR Committee	NA	$ 318.00	NA	$ 991.00	$ 996.00	- 3%	NA
Direct Administration	$ 1,995.00	$ 2,355.00	18%	--	$ 893.00	NA	NA

Notes: 1/ All physician time paid has been included; donated time is not.

2/ Percent = $\frac{\text{PSRO Activity Cost}}{\text{Non-PSRO Activity Cost}} - 1$

3/ No UR Committees were identified in Area 13 because it was a pre-test area.

4/ Units based on hypothetical identical hospitals each with 200 beds and 9,000 discharges, 3,000 of which are federal.

TABLE 6-VII-P

COMPARISON OF UNIT COSTS IN TWO MATCHED NON-PSRO AND PSRO AREAS
(Including All Physician Time 1/)

Review Activity 3/	Southern Match: Non-PSRO Area 13	Southern Match: PSRO Area 1	Southern Match: Percent Difference 2/	Central Match: Non-PSRO Area 14	Central Match: PSRO Area 11	Central Match: Percent Difference 2/	Average Percent Difference
Total Hospital Cost Per Discharge	$ 7.35	$ 10.79	47%	$ 5.90	$ 10.28	74%	61%
Total Cost Per Discharge, Including PSRO Operating 4/	$ 7.35	$ 14.62	99%	$ 5.90	$ 23.37	296%	195%
Concurrent Review	$ 5.48	$ 6.85	25%	$ 3.47	$ 7.52	117%	71%
Medical Audits	$ 207.00	$ 263.00	27%	$ 314.00	$ 153.00	- 51%	- 12%
Nurse and Other Audits	$ 134.00	NA	NA	$ 237.00	--	NA	NA
Abstracting	$ 0.32	$ 2.19	584%	$ 0.94	$ 1.68	79%	332%
UR Committee	NA	$ 1,757.00	NA	$ 1,953.00	$ 1,751.00	- 10%	NA
Direct Administration	$ 2,258.00	$ 2,442.00	8%	--	$ 866.00	NA	NA

Notes: 1/ All physician time (donated and paid) has been costed at $25.00/hour and payment estimated for 90 percent of the claimable hours.

2/ Percent = $\frac{\text{PSRO Activity Cost}}{\text{Non-PSRO Activity Cost}} - 1$

3/ No UR Committees were identified in Area 13 because it was a pre-test area.

4/ Units based on hypothetical identical hospitals each with 200 beds and 9,000 discharges, 3,000 of which are federal.

- More detailed abstracts were completed in the two PSRO areas.

- In most of the PSRO area hospitals, review coordinators (usually registered nurses) completed the PSRO abstract; in the non-PSRO hospitals, abstracts were completed by medical records clerks who had significant duties other than UR.

- In many of the PSRO hospitals, a two-stage abstract completion process was used. Review coordinators initially completed the abstract from the PSRO review document and the abstract was then sent to the medical records unit, where it would be checked against the patient chart.

To understand better the differences in hospital UR costs between PSRO and non-PSRO areas, the study team examined flowcharts of hospital UR activities developed in the study to determine the extent of CR in new UR programs in non-PSRO areas. Activities observed in hospitals in non-PSRO areas appeared to be related to hospital size; smaller hospitals tended to have more limited and larger hospitals more extensive UR systems. The proportions of strong and weak UR systems observed that the two non-PSRO areas were:

- Approximately 60 percent of hospitals in the non-PSRO area had strong UR systems. These hospitals included in the Central part of the United States 76 percent of the beds and 79 percent of inpatient days for all hospitals in the area.

- Approximately 40 percent of the hospitals with 46 percent of total area beds and 46 percent of total area inpatient days in the Southern non-PSRO area had strong review systems.

The Central area, whose sampled UR costs were 18 percent less than in the Southern area, had the stronger UR system in the judgment of the project staff, based upon their review of UR flowcharts. In both PSRO and non-PSRO areas, there appeared to be little relationship between UR costs and the competence of UR programs in hospitals (also determined by review of flowcharts).

In summary, PSRO UR costs are considerably greater than for new UR as practiced in the observed non-PSRO areas. The extra cost of PSRO UR does not necessarily imply, however, greater or more effective UR process activity at the hospital level.

6.7 UR Expenditures Increased More Than 300 Percent Between Old UR And PSRO UR And More Than 200 Percent From Old UR To New UR

Estimates of the cost of old UR (review performed in 1974 under the old Medicare regulations) were collected during site visits to all 90 hospitals in PSRO areas and the 23 hospitals in non-PSRO areas. Although extensive flowcharting and cost development were not undertaken for the 1974 data,[1/] (see the Interview Guide, Appendix A, pages III-6 and Exhibit IV), a simple technique was used to estimate the general old UR expenditure level. This permitted comparisons to be made in the growth of UR expenditures between PSRO and non-PSRO areas from 1974 to 1976.

Table 6-VIII, following this page, compares the mean in-hospital costs of old UR with PSRO delegated UR and new UR. Points of interest include:

1/ After site visits to the pre-test hospitals, a simple old UR estimation strategy was adopted because a high turnover of old UR staff had been encountered. Often no personnel who had directly participated in old UR were available to interview, and those knowledgeable people who could be interviewed often only vaguely recalled the 1974 old UR process. More specific data collection was futile.

TABLE 6-VIII

OLD UR IN 1974 COMPARED TO PSRO UR AND NEW UR IN 1976

PSRO Areas: N = 90 Hospitals

		Old UR	Delegated PSRO UR	Percent Difference *
Cost Per Hospital:	Excluding Donated Physician Time	$ 7,771	$ 38,772	399%
	Including Donated Physician Time**	$ 10,812	$ 49,947	362%
Cost Per Hospital Bed:	Excluding Donated Physician Time	$ 37	$ 173	367 %
	Including Donated Physician Time**	$ 55	$ 224	307%
			Average:	359%

Non-PSRO Areas: N = 23 Hospitals

		Old UR	New UR	Percent Difference*
Cost Per Hospital:	Excluding Donated Physician Time	$ 5,886	$ 20,270	244%
	Including Donated Physician Time**	$ 8,502	$ 23,727	179%
Cost Per Hospital Bed:	Excluding Donated Physician Time	$ 25	$ 104	316%
	Including Donated Physician Time	$ 35	$ 134	282%
			Average:	255%

Notes: * Percent change $= \frac{\text{PSRO UR Cost}}{\text{Old UR Cost}} - 1$

** All physician time (paid and donated) has been costed at $25.00/hour and payment made for 90 percent of the claimable hours based on federal reimbursement guidelines. For new UR, the same rules are applied; however, the federal guidelines are not applied since they relate only to PSRO activity.

- Figures excluding the estimated value of donated physician time show a greater percentage increase than those including such time, indicating that physician donated time did not increase as rapidly as total paid personnel time in either the PSRO or new UR areas.

- In 1974, the general level of expenditure for old UR was higher in the areas that later initiated PSRO review than in those that did not. On a per hospital basis, old UR costs in current PSRO hospitals were about 30 percent higher than in hospitals never in PSRO. On a per bed basis, PSRO hospitals are over 50 percent higher in old UR costs. Further, although UR costs increased over 200 percent from 1974 to 1976 in non-PSRO areas, they increased more than 300 percent in the PSRO areas for the same time period. This finding is no surprise because the non-PSRO areas generally have more strongly resisted the idea of a governmentally mandated UR program.

6.8 PSRO UR And New UR Area Total Costs For Sample Areas Based On Activities Completed In 1976

Table 6-IX, following this page, presents the total cost in 1976 of the UR programs in the 14 sample areas participating in this study. The range of the total costs extends from a low of $147,000 to a high of $1,830,300 and is accounted for almost entirely by differences in the number of patients reviewed. Other key variables include:

- Geographic size of the area
- Number of hospitals included in the area
- Differences in the extent and type of UR program

The total UR program gross costs average 9 percent higher for all 14 areas when an estimated cost of donated physician time for delegated review is included, with a range from 3 to 18 percent among the 14 areas. Thus, it is clear that some areas use a substantially higher level of donated physician time.

TABLE 6-IX

GROSS TOTAL COST OF UR IN 14 SAMPLE AREAS BASED ON COST AND ACTIVITY EXPERIENCES IN 1976
(Costs In Thousands)

		Excludes Donated Physician Time				Includes Donated Physician Time*	
		Cost Delegated Review	Cost Nondelegated Review	PSRO-Level Operating Costs	Total Gross Costs	Cost Delegated Review	Total Gross Cost**
Primarily Delegated Areas:	100	$ 677.8 ± $ 108.1	$ 26.1	$ 287.7	$ 991.6 ± $ 108.1	$ 874.7 ± $ 113.1	$ 1,118.5 ± $ 113.1
	400	539.2 ± 84.2	9.8	156.5	705.5 ± 84.2	629.1 ± 87.2	795.4 ± 87.2
	500	533.7 ± 79.2	125.6	229.8	889.1 ± 79.2	594.4 ± 80.7	949.8 ± 80.7
	600	564.1 ± 38.8	--	198.4	762.5 ± 38.8	702.1 ± 57.2	900.5 ± 57.2
	700	221.0 ± 22.4	--	116.5	337.5 ± 22.4	237.4 ± 28.7	353.9 ± 28.7
	800	65.6 ± 10.5	11.6	80.0	157.2 ± 10.5	71.5 ± 11.0	163.2 ± 11.0
	900	130.0 ± 16.2	--	143.9	273.9 ± 16.2	137.7 ± 14.7	281.6 ± 14.7
	1100	301.3 ± 54.0	42.4	423.0	766.7 ± 54.0	383.8 ± 75.4	849.2 ± 75.4
	1200	135.4 ± 97.0	--	69.1	204.5 ± 97.0	148.1 ± 8.8	217.2 ± 8.8
Nondelegated Areas:	200	***	$ 101.3	$ 45.7	$ 147.0	***	$ 147.0
	300	***	606.0	1,224.3	1,830.3	***	1,830.3
	1000	***	437.8	399.8	837.6	***	837.6
Non-PSRO Areas:	1300	$ 1,323.7 ± $ 353.8	$ --	$ --	$ 1,323.7 ± $ 353.8	$ 1,615.9 ± $ 345.2	$ 1,615.9 ± $ 345.2
	1400	245.4 ± 94.8	--	--	245.4 ± 94.8	378.0 ± 116.4	378.0 ± 116.4

Notes: * All donated physician hours have been costed at $25.00/hour, and payment made for 90 percent of the claimable hours.

** The total gross cost, including donated physician time, is the summation of delegated review costs, nondelegated review costs, and PSRO-level operating costs. Both the nondelegated review cost and the PSRO-level operating costs remain the same as the costs in excluded donated physician time columns since little change is expected in the pay status of physicians working directly with the PSROs.

*** The characteristics of the small number of delegated hospitals in these areas are unknown, so delegated costs could not be calculated. A 200-bed hospital would cost around $30,000, so Area 200 is possibly $60,000 lower and Area 300 possibly $150,000 lower than they should be.

6.9 Analysis Of PSRO Operating And Start-Up Costs

This section discusses some of the relationships among the three types of PSRO level costs:

- PSRO start-up costs
- PSRO operating costs (excluding nondelegated review)
- Nondelegated review costs

PSRO level start-up and operating costs were easily differentiated for all three fiscal years for which data were collected. Nondelegated PSRO review costs could also be isolated from the other PSRO activity costs without difficulty.

Because the sample size of PSROs in this study was small and some sample PSROs benefited from earlier experiences with EMCRO, medical care foundation, or other review systems development in their areas, start-up data from this section should not be considered representative of all present or future PSROs; the data, however, do provide an insight into the costs of PSRO start-up. (Start-up activities include the development of systems and procedures for CR, MCEs, and profile analysis; the development of criteria; establishment of relationships with providers; and the training of PSRO and hospital staff as well as actual implementation of the program.)

The proportion of PSRO start-up costs to PSRO operating costs decline steadily for the three years covered by this study (i.e., 68 percent in 1975, 27 percent in 1976, and 9 percent in 1977). It is important to note that only one program had completed start-up for inpatient acute care UR and three others were still spending more than 20 percent of their budget for start-up activities in the third year. It is apparent that some start-up activities will continue for a number of years as PSROs evolve. Data collected and cost estimates presented in this study, therefore, underestimate the full start-up costs for the 12 sample PSROs in this study by an unknown, but probably small, amount. Approximately $200,000 per PSRO was invested in start-up, or an

average of $4.08 per federal discharge reviewed in the PSROs included in this study.[1/] Because the median cost for start-up was $139,000, a fairer estimate of start-up costs for new or evolving PSROs would be around $150,000. On the basis of observations made of start-up activities in the sample PSROs, little savings can be expected in future start-up costs of younger or new PSROs. Each PSRO faces different problems and takes a unique approach to start up. Although savings may be possible through the adaptation of existing PSRO systems, the substantial costs of training review personnel and orienting providers to the program appear to stay the same.

Factors that appear to impact on the size of start-up costs include:

- The receptivity of local providers to PSRO program participation
- The availability of previously trained review coordinators and other personnel who understand UR
- The availability to the new PSRO of an established PSRO UR system that can be adapted with minimal changes to the new PSRO's unique political and managerial environment

The geographic size of the PSRO area has little apparent impact on start-up costs. However, there may be regional differences, since sample PSROs in the Eastern part of the United States had slightly higher unit costs (averaging $4.59 versus $4.08 for PSROs in other parts of the country). Also, the delegation status (i.e., predominantly delegated versus predominantly nondelegated) of a PSRO appears to be related to start-up costs; the three nondelegated PSROs in the study were much less expensive ($2.52 was the average unit cost for nondelegated areas).

1/ The unit costs used for comparison of start-up costs among PSROs are based upon the formula:

$$\frac{\text{Accumulated Start-Up Costs (in dollars)}}{\text{Number of Discharges Reviewed in the Most Recent Year}} = \text{Unit Cost (Start-up cost per review conducted)}$$

The accumulated start-up costs will include all start-up costs since the PSRO was established; for this reason, they will be measured over a period of several years. The value of these unit costs is that a new or evolving PSRO can estimate its total start-up costs by multiplying the estimated number of federal inpatients that will be reviewed in its area during a year by the unit start-up costs developed in this study.

The relationship of PSRO start-up costs to operating costs, once implementation was achieved was investigated. It appears that a heavy emphasis on start-up (and therefore larger start-up costs) is not associated with lower PSRO operating, hospital delegated review, or PSRO nondelegated review costs. Table 6-X, following this page, shows the unit start-up costs associated with various measures of PSRO activity that occur once start-up has been completed. It is apparent that, among the PSRO areas included in this study, start-up costs were not associated with any particular trend in review activity costs.

Total annual operating costs observed at sample PSROs averaged $370,000 per PSRO in 1977, or $7.11 per discharge reviewed. Operating costs include activities such as management, monitoring, and evaluation of delegated and nondelegated review activity; data processing (primarily profile analysis); ongoing criteria development; liaison with providers; and general administrative activities. Although current activities that meet this definition are included in operating costs identified (i.e., $7.11 per discharge), it is not clear that all operational activities have stabilized as yet in the sample PSRO areas. Currently, approximately 47 percent of the operating costs are spent on general administration and another 12 percent on data processing. Some PSROs spent as little as 17 percent on general administration and as much as 25 percent on data processing. Also, most PSROs indicated that they were still developing and refining their monitoring techniques, so future cost increases for this function are likely. However, it is unclear whether any increased emphasis on monitoring can be achieved by reducing general administrative expenses, if not, overall costs will rise.

The only factor with which unit operating cost level was statistically associated was the total number of discharges reviewed within the jurisdiction of the PSRO. A correlation of -.48 was found when operating unit costs and

TABLE 6-X

COMPARISON OF PSRO START-UP COSTS AND OPERATING COSTS IN EACH PSRO AREA

	PSRO Number	Costs Per Federal Discharge Reviewed: Start-Up	PSRO Nondelegated Review	Hospital Delegated Review (CR + Abstracting)	PSRO Operating
Delegated PSROs:	1	$ 5.62	$ 2.00	$ 7.24	$ 3.83
	4	1.74	11.35	6.22	2.52
	5	1.69	7.58	8.47	3.54
	6	2.65	None	7.71	3.97
	7	5.82	None	12.02	8.38
	8	3.12	5.53	4.17	10.42
	9	6.75	9.54	6.80	9.38
	11	7.78	19.31	7.41	13.09
	12	6.26	None	11.20	8.60
Nondelegated PSROs:	2	3.46	10.88	--	4.56
	3	2.56	5.67	--	9.86
	10	1.54	8.13	--	7.17
	Average	$ 4.08	$ 8.89	$ 7.92	$ 7.11
Average Delegated		$ 4.60	$ 9.22	$ --	$ 7.08
Average Nondelegated		$ 2.52	$ 8.23	--	$ 7.20

number of reviews were compared. This indicates that there may be some economies of scale in unit costs when UR is expanded to cover nonfederal patients. For instance, if all acute care inpatients were to be reviewed under national health insurance, a savings on a unit basis should occur. Based on the data from sample PSROs it appears that PSRO operating costs may be cut to as little as four dollars per discharge review if all patients are reviewed.

7.0 DESCRIPTION OF CURRENT UR PROCESSES OBSERVED AT SAMPLE HOSPITALS AND PSROs

7.0 DESCRIPTION OF CURRENT UR PROCESSES OBSERVED AT SAMPLE HOSPITALS AND PSROs

The five basic elements identified as cost components of PSRO review--concurrent review, medical care evaluations, abstracting and profile analysis, utilization review committee, and direct administration--were found in all PSRO-area hospitals. Concurrent review systems were found to be similar structurally but different from hospital to hospital in terms of the amount and specific focus of effort. The most striking differences among hospital UR programs are in medical care evaluation studies.

This section discusses the following topics:

- Differences in concurrent revenue operations
- Problems encountered in concurrent review implementation
- Quality assurance mechanisms in concurrent review systems
- Medical care evaluation studies
- Use of patient abstract information
- Activities of UR committees
- Hospital administrative activities supporting the UR function
- Activities observed in old UR and new UR programs
- PSRO-level management and monitoring of in-hospital review

7.1 Concurrent Review Systems On Paper Are Generally Similar Among Sample Hospitals, But They Vary In Terms Of How Well They Are Implemented

All in-hospital concurrent review (CR) systems observed in this study had admissions review and continued stay review components. (Concurrent quality assurance review was observed rarely and will be discussed in section 7.3.) Most of the CR process is handled by review coordinators and the basic procedures they undertake in a typical PSRO system involve:

- Patients Who Need To Be Reviewed Are Identified--The review coordinator (RC) from the admitting office obtains the names and locations of newly admitted patients to be reviewed. Often, admission slips or cards prepared at the admissions office are obtained and sorted for patients requiring review. Alternatively, in many hospitals, a computer system identifies patients' locations and their pay category on a daily basis, and the printouts are used to identify patients requiring review. (Where such computer systems were found, they were independent of UR and would be continued, regardless of the status of PSRO UR implementation.)

- Review Documentation Is Initiated--Documentation, such as a review worksheet, is generally initiated by the RC at the initiation of admissions review (AR). Information pertinent to review through the course of the patient's stay is recorded on this document, including identifiers, the patient's diagnosis and assigned length of stay, and more often specific data useful in developing the PHDDS abstract when the patient is discharged. (A few hospitals used the abstract form as the review worksheet and were, thus, able to eliminate the separate abstracting function.)

- Admissions Are Reviewed--The RC inspects the patient's medical record to see if a diagnosis or "signs and symptoms" are documented. If the information on the chart justifies the admission of the patient to the hospital, based on admissions indicators documented in the criteria manual, the admission is certified by the RC. If the information provided by the attending physician does not justify admission to the hospital, the case is referred to a review physician for consideration and follow-up with the attending physician. Generally

speaking, RCs actually go to the nursing stations around the hospital to complete their reviews. In some cases, however, patient records are collected and brought to the UR office for review. More than half of the time, review physicians, when cases are referred to them, rely on the review document rather than the patient's medical record. Review documents are generally designed to contain the essential summary information needed to make a certification determination.

- "Length Of Stays" Are Assigned--The RC refers to PAS tables to assign each case a number of days in the hospital. In virtually all cases observed, the initial "length of stay assigned" (LOSA) is based on the PAS 50th percentile for the diagnosis and age category in which the patient falls.

- Cases Are Reviewed For Extension Of "Length Of Stay"--As the initial LOSA nears expiration, the RC reviews the case to ascertain if justification exists for extension. If no justification exists, the case is referred to a review physician. If reason for extending the LOSA is indicated, additional days are granted by the RC up to the 75th percentile in PAS. Criteria manuals observed generally have sections documenting extension indicators. However, it appears that extension considerations are generally based more on the RC's professional judgment and the attending physician's plans for the patient than on documented criteria. Each case is reviewed again when any extended LOSA runs out. RCs can, in some hospitals, extend the LOSA to the 90th percentile without review physician approval. Beyond the 90th percentile, the review physician generally must review all cases before further extension can be granted.

- Abstracts Are Prepared--After the patient is discharged, the information required for PHDDS purposes is coded onto an abstract form. This coding usually is completed from the review document, but, in some hospitals, the abstract is developed from the patient's medical record.

The differences found among the basic CR systems were examined with regard to:

- The relative complexity of the system, i.e., how many discrete tasks are involved

- The differences in the manner in which the significant steps in the process are being carried out

The complexity of the CR process is related to the size of the hospital. Figure 7-I, CR System Typical of Smaller Hospitals, following this page, presents an example simple system. The distinguishing features include:

- Responsibility for all tasks (with the exception of physician review of charts) rests with a single review coordinator
- Contact with the attending physicians is handled informally
- A minimal number of specific procedures are involved and few check procedures are employed to make sure all necessary activities have been completed

Figure 7-II, CR System Typical of Large Hospitals, following Figure 7-I, illustrates how the basic CR system becomes more complex when implemented on a larger scale. Key features of this model include:

- Clerical functions are disassociated from the review coordinator's role (e.g., secretary, admitting clerks, review clerk, billing clerk, and medical records clerk are involved)
- Contact with the attending physicians by the review coordinator is handled through the use of forms
- Control procedures are present (e.g., checks to assure that no patients are missed, all denied patients are notified, no information is missed on the abstract, and no charges are missed on the bill)

The presentation of these models is not intended to imply that one or the other CR system is necessarily more effective. In general, programs that appeared to be strong from a process standpoint had the following interrelated characteristics:

- Integration of UR with other hospital functions 1/
- Review coordinators who are committed to the program and believe that their work has impact

1/ Evidenced by the interaction with and cooperation of non-UR personnel (e.g., admissions, business office, nursing, medical records, social services) and the presence of a large, active, well-attended UR committee with physician as well as nonphysician members.

FIGURE 7-1

Office of Planning, Evaluation, and Legislation

CONCURRENT REVIEW SYSTEM TYPICAL OF SMALL HOSPITALS

KEY TO ABBREVIATIONS:

Personnel Involved in Incremental Tasks

- AC = Admitting Clerk
- AO = Admitting Office
- AP = Attending Physician
- CRC = Chairman, Review Committee
- DMR = Director of Medical Records
- ECF = Extended Care Facility
- ED = Executive Director
- FI = Fiscal Intermediary
- HAP = Hospital Appeals Panel
- IC = Insurance Clerk
- MRC = Medical Records Clerk
- P = Patient
- PRAP = PSRO Regional Appeals Panel
- PRC = Physician Review Committee
- PQAC = PSRO Quality Assurance Panel
- RC = Review Coordinator
- RCP = PSRO Review Coordinator
- RK = Review Clerk
- RP = Review Physician
- S = Secretary
- SNF = Skilled Nursing Facility

PSRO Documents Used

- PRA = PSRO Review Abstract
- PRD = PSRO Review Document
- RWCC = Review Work Control Card

Other Abbreviations

- AI = Admissions Indicators
- AR = Admissions Review
- Cd = Coders
- CSR = Continued Stay Review
- Dx = Diagnosis
- LOSA = Length of Stay Assigned
- MR = Medical Records
- PA = Patient Abstract
- PAS = Professional Activities
- PC = Patient Chart
- QAR = Quality Assurance Review

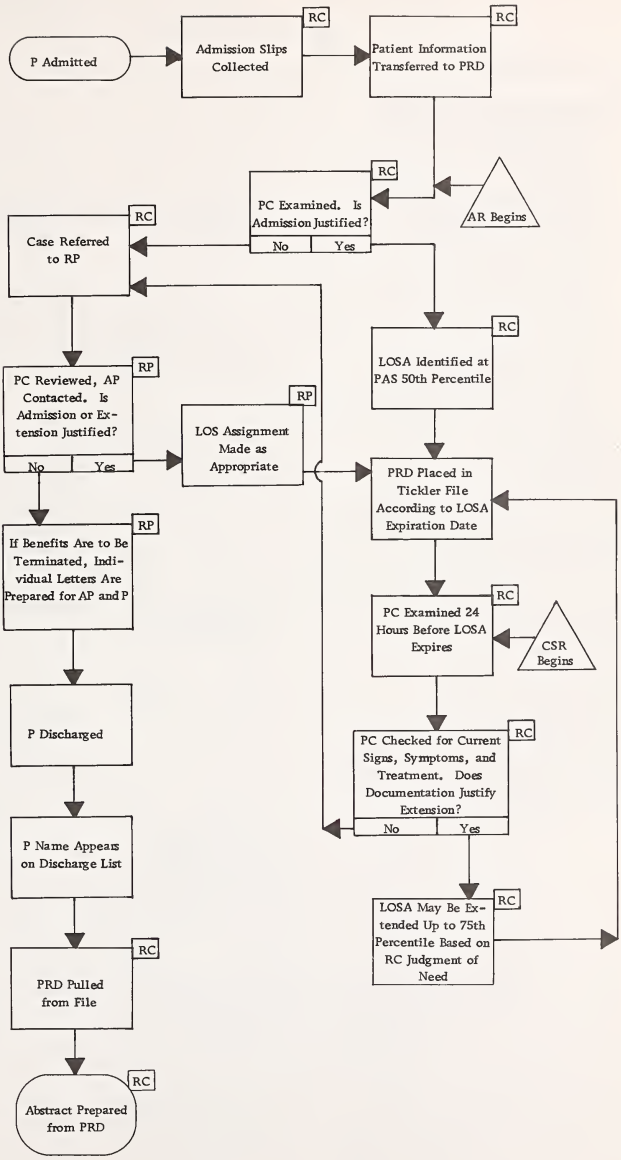


FIGURE 7-II(1)

Office of Planning, Evaluation, and Legislation

CONCURRENT REVIEW SYSTEM TYPICAL OF LARGE HOSPITALS

KEY TO ABBREVIATIONS:

Personnel Involved in Incremental Tasks

AC = Admitting Clerk
AO = Admitting Office
AP = Attending Physician
BC = Billing Clerk
CRC = Chairman, Review Committee
DMR = Director of Medical Records
ECF = Extended Care Facility
ED = Executive Director
FI = Fiscal Intermediary
HAP = Hospital Appeals Panel
IC = Insurance Clerk
MRC = Medical Records Clerk
P = Patient
PRAP = PSRO Regional Appeals Panel
PRC = Physician Review Committee
PQAC = PSRO Quality Assurance Panel
RC = Review Coordinator
RCP = PSRO Review Coordinator
RK = Review Clerk
RP = Review Physician
S = Secretary
SNF = Skilled Nursing Facility

PSRO Documents Used

PRA = PSRO Review Abstract
PRD = PSRO Review Document
RWCC = Review Work Control Card

Other Abbreviations

AI = Admissions Indicators
AR = Admissions Review
Cd = Coders
CSR = Continued Stay Review
Dx = Diagnosis
LOSA = Length of Stay Assigned
MR = Medical Records
PA = Patient Abstract
PAS = Professional Activities
PC = Patient Chart
QAR = Quality Assurance Review

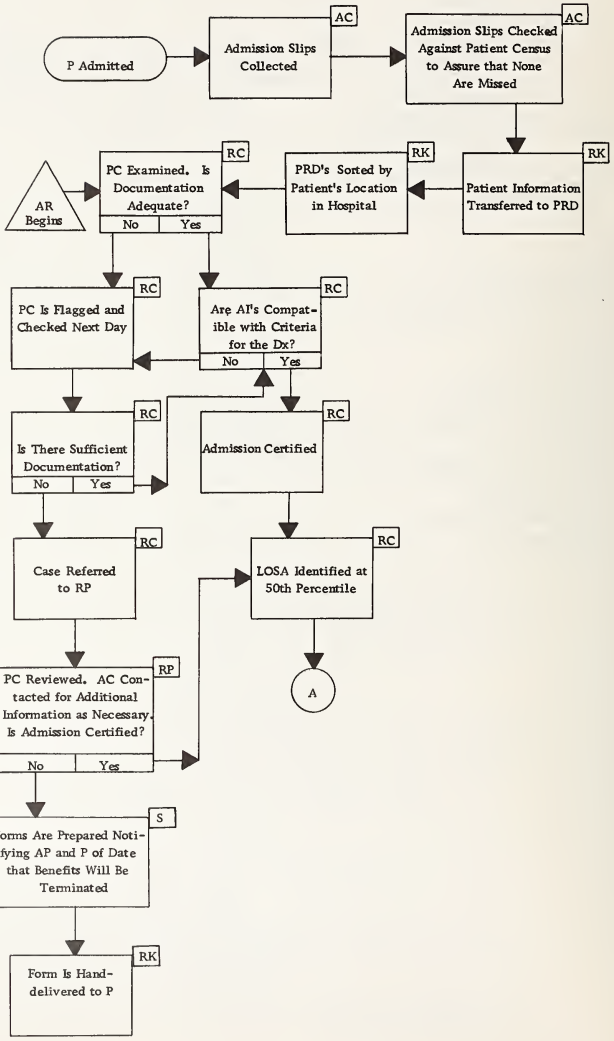
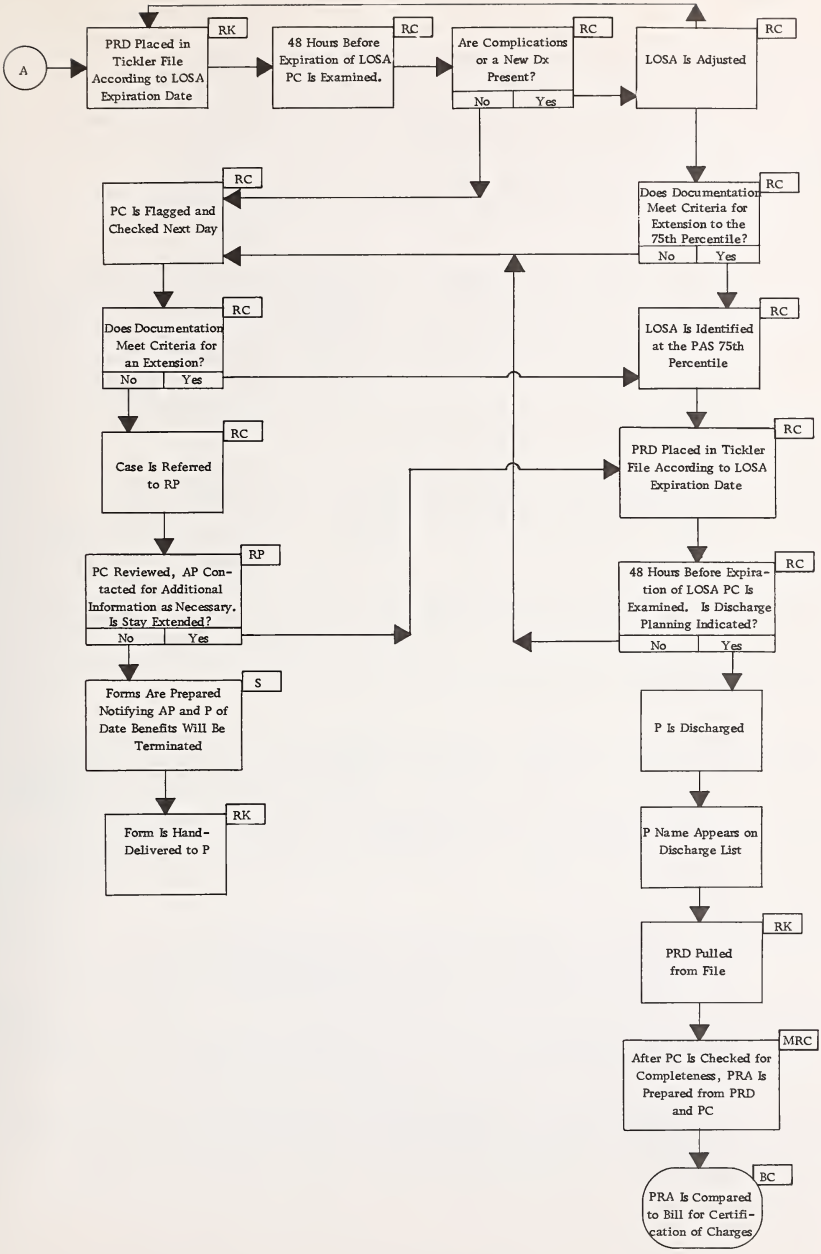


FIGURE 7-II(2)


A
PRD Placed in Tickler File According to LOSA Expiration Date
RK
48 Hours Before Expiration of LOSA PC Is Examined.
RC
Are Complications or a New Dx Present?
No
Yes
RC
LOSA Is Adjusted
RC
PC Is Flagged and Checked Next Day
RC
Does Documentation Meet Criteria for Extension to the 75th Percentile?
No
Yes
RC
Does Documentation Meet Criteria for an Extension?
No
Yes
RC
LOSA Is Identified at the PAS 75th Percentile
RC
Case Is Referred to RP
RC
PRD Placed in Tickler File According to LOSA Expiration Date
RC
PC Reviewed, AP Contacted for Additional Information as Necessary. Is Stay Extended?
No
Yes
RP
48 Hours Before Expiration of LOSA PC Is Examined. Is Discharge Planning Indicated?
No
Yes
RC
Forms Are Prepared Notifying AP and P of Date Benefits Will Be Terminated
S
P Is Discharged
Form Is Hand-Delivered to P
RK
P Name Appears on Discharge List
PRD Pulled from File
RK
After PC Is Checked for Completeness, PRA Is Prepared from PRD and PC
MRC
PRA Is Compared to Bill for Certification of Charges
BC

- Program support from hospital administrators

- Presence of enforcement mechanisms to ensure physician and nonphysician cooperation

Variations in significant steps in the CR process often appeared to be related to the level of support for the program within the hospital:

- Initial Check For Adequate Documentation--Standards for adequacy of documentation on admission vary widely. Some systems require that specific admission indicators be present to support the indicated diagnosis or "signs and symptoms." Others only require the presence of an admitting diagnosis or some indication of "signs and symptoms" in order to certify an admission.

- Notification Of Attending Physician Of Documentation Inadequacy And Follow-Up Actions--This may be handled either by personal contact, phone call, attachment of a form or sticker to the patient's chart, or a combination of the above techniques. Usually, the review coordinator attempts to contact the attending physician before making a referral to the review physican. However, in some hospitals, documentation inadequacies are referred directly to the review physician.

  In some hospitals, review coordinators have no established mechanism even to request complete documentation; in others, systems to request additional information have been established, with penalties for failure to provide documentation, such as suspension of physician admitting privileges for a designated period of time after a set number of documentation problems have occurred.

- Examination Of The Patient Chart For Justification Of Extension Of Length Of Stay Assigned (LOSA)--The authority exercised by the review coordinators varies. Usually, review coordinators exercise professional judgment in extending LOSAs from the 50th and 75th percentile (all denials must be referred to a review physician), although, in some systems, review coordinator judgment is exercised up to the 90th percentile. Some review coordinators demand specific justification (e.g., the presence of extension indicators or problems in patient response) on each case before granting

an extension. Others grant extensions almost automatically, if no discharge plans are present, whether or not clear need is indicated. The extent of factors considered in the extension decision also has a broad range. Some review coordinators look at nursing notes, consult nurses, and consider "human factors" when considering an extension. Others rely solely on physician-supplied documentation.

Most systems also allow grants of additional days by the review coordinator under special circumstances. Some review coordinators and hospitals are very liberal in their interpretation of what kinds of problems deserve special consideration and others are very conservative.

- Case Review By Review Physicians--Review physician involvement in cases ranges from the perfunctory initialling of review documents whenever it is convenient, to a detailed review of the patient record, including participation in the case in a consultative capacity. Perfunctory reviews may occur where:

  - The review coordinator's professional judgment is supported by the review physician without question

  - Review physicians, support the attending physician's judgment, unless the situation is very severe

7.2 Common Problems Observed In Hospital UR Programs And Solutions Attempted By The Hospitals

A variety of strategies had been devised by hospitals in response to UR problems.

Problem 1: In many cases, review coordinators reported that review physicians were unwilling to deny cases that really should have been denied.

Responses:

A. Problem not addressed. RC had no access to administration to suggest changes or did not use access.

B. Coding of RP identity. One hospital instituted a system whereby the review physicians were assigned code numbers to conceal their identities from the attending physicians.

The RCs were used as go-betweens so that review physicians would not have to confront attending physicians directly. The number of denials subsequently increased.

C. Change of leadership. After supervision of the PSRO program was shifted to a new, more interested director, the number of denials increased dramatically.

D. Referral of denials to a three-physican review committee to confirm the reviewing physician's denial before notifying the attending physician. Some hospitals used a small committee to review cases denied by the first reviewing physician so that, when denials were made, the judgments of four physicians were involved. This was done to increase peer pressure as well as to diffuse any animosity the attending physician might develop toward a single reviewing physician that denied the attending physician's cases.

Problem 2: RCs report that many physicians are minimally responsive to requests to supply sufficient documentation.

Responses: A. Problem not addressed. In some hospitals, follow-up on failures to document is not energetic. "Physician prerogative" on the review document is used to justify virtually anything unusual about a case.

B. Use of "denials" to prompt physicians. One hospital routinely issues denials when sufficient documentation does not appear on the chart within 24 hours of admission. Most of these denials are subsequently reversed when documentation is provided.

C. Use of senior, semi-retired physicians to talk to attending physicians. A number of hospitals use senior, semi-retired physicians to act as physician advisors. These respected local physicians approach problem physicians with an educational emphasis.

D. Use of RC personal contact with the attending physicians. In several hospitals where physician notification by means of forms was consistently ignored, the RCs invested considerable extra time waiting in hallways, etc., in order to contact attending physicians personally.

E. Exposure of problem physicians to peers. One RC, who believes in "pointing the finger in order to make the system work," employs such tactics as posting notices on the bulletin board, confronting the physicians at their lunch table, and announcing violations at UR committee meetings.

F. Selection of RCs with an appealing personality. Several administrators in hospitals where the RCs contact attending physicians consider an appealing personality to be an essential prerequisite for the position of review coordinator. All RCs in these hospitals were young, attractive women.

G. Notifying patients of the need for documentation. One hospital sends notices to patients informing them that, if their physician fails to supply adequate documentation, their benefits will be terminated.

H. Provide reluctant physicians with a tape recorder to record necessary documentation. In one hospital where an 85-year old physician made it clear he was not willing to spend the time documenting charts, he was provided with a pocket cassette tape recorder. A secretary would then transcribe the tapes in order to get the required documentation into the charts.

I. Regular documentation checks instituted, with threat of suspension of admitting privileges, for problem physicians. As part of her regular responsibilities, one RC was assigned the responsibility of checking the documentation on all federal patients every two days. If documentation was not provided on a case after two documentation checks, the errant physician would face the loss of his or her admitting privileges.

Problem 3: The payment status of some patients is not known or is incorrect at the time of admission, so some patients later identified as federal are not initially reviewed.

Responses:

A. Problem not addressed. All appropriate patients are not reviewed.

B. Retrospective review. These cases may be reviewed after their actual pay status is discovered, which often does not occur until after discharge.

C. Review all federal and "self-pays." This tactic eliminates a large number of retrospective reviews while sparing the hospital the expense of reviewing all patients. This is possible because changes in pay status which affect the need to review the patient most frequently occur with those who originally claim that they will pay their own bills.

D. Review all patients. Reviewing all patients assures that no federal patients will be missed.

Problem 4: There is no procedure to focus on frequently abused diagnoses at the time of admission.

Responses:

A. Problem not addressed. RCs feel as though they are picking on certain physicians by challenging diagnoses that appear tenuous.

B. Categorization of admissions based on extent of problems experienced with the diagnosis. One PSRO instituted a procedure that provides that all admissions be sorted into four categories. If the patient's diagnosis falls in the first two categories, the RC can certify the stay and assign an LOS without referring to a physician. Categories III and IV consist of diagnoses that need RP approval for admission.

7.3 Concurrent Quality Assurance Mechanisms Are Unusual, But They Exist In Some Hospitals

Two basic approaches to concurrent quality assurance review (QAR) associated with UR were found in sample hospitals:

- Formal QAR--Involving review of patient charts against specified criteria
- Informal QAR--Involving the review coordinator's subjective judgment and alertness to identify potential quality of care problems

One PSRO area visited features areawide implementation of formal QAR. Figure 7-III, Concurrent Review Process With Formal Quality Assurance Review, following this page, shows how QAR is incorporated into the concurrent review process in that PSRO area. At the time of admissions review,

FIGURE 7-III

Office of Planning, Evaluation, and Legislation

CONCURRENT REVIEW PROCESS WITH FORMAL QUALITY ASSURANCE REVIEW

KEY TO ABBREVIATIONS:

Personnel Involved In Incremental Tasks

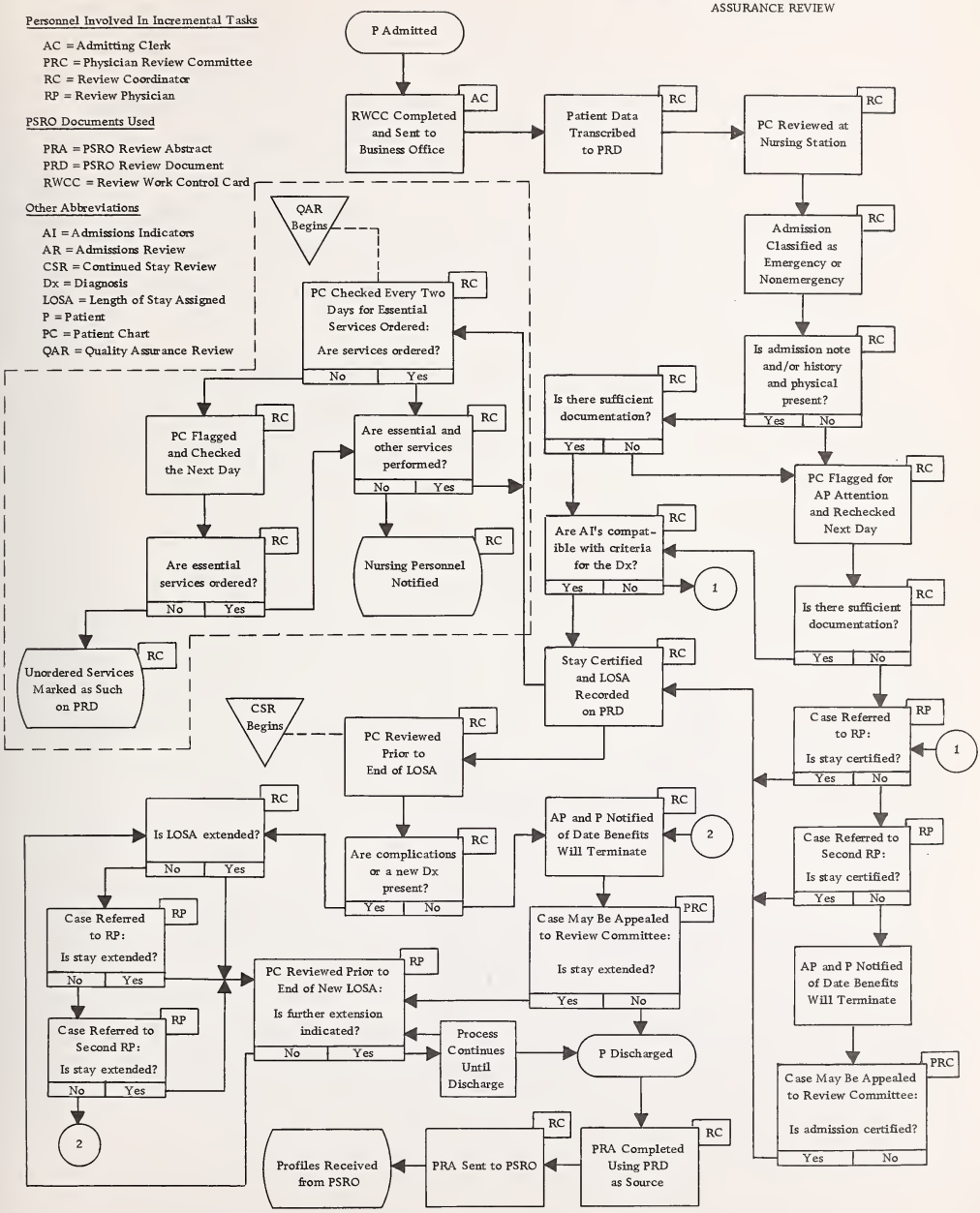
AC = Admitting Clerk
PRC = Physician Review Committee
RC = Review Coordinator
RP = Review Physician

PSRO Documents Used

PRA = PSRO Review Abstract
PRD = PSRO Review Document
RWCC = Review Work Control Card

Other Abbreviations

AI = Admissions Indicators
AR = Admissions Review
CSR = Continued Stay Review
Dx = Diagnosis
LOSA = Length of Stay Assigned
P = Patient
PC = Patient Chart
QAR = Quality Assurance Review



the review coordinator looks up the diagnosis in a manual. After checking to make sure that admissions indicators have been met, a set of "essential procedures" required for that diagnosis (i.e., specific services determined by local physicians to be required for the diagnosis) is recorded on the review document. Every two days, the charts are checked to assure that the "essential services" were ordered and received and that all other services ordered by the physician were provided. Attending physicians may indicate reasons for the omission of "essential services," as appropriate, but each required service must be addressed specifically.

Highly similar quality assurance mechanisms were found in scattered hospitals within two other PSRO areas. However, several of the hospitals that elected to do quality assurance review did it on an occasional basis, and, when completed, a random sample of the patients (not all patients) were covered.

An informal QAR was found in another area and is summarized in Figure 7-IV, CR Process With Informal Quality Assurance Review, following this page. The QAR dimension of this system depends on the review coordinator's professional judgment and alertness to initiate action on possible medical mismanagement of cases. Potential problems identified are referred to a review physician for confirmation and then to the chief review physician and, eventually, the hospital medical committee, as needed. No specific sanctions or follow-up have been developed. Change is expected through peer pressure.

7.4 The Level Of Effort Invested In Medical Care Evaluation Studies Varies Widely Among The Hospitals

The range of emphasis placed on medical audits encountered in sample hospitals varied from very high, i.e., the process was seen as an important part of quality care, to a process performed perfunctorily in order to meet

FIGURE 7-IV(1)

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CONCURRENT REVIEW PROCESS WITH INFORMAL QUALITY ASSURANCE REVIEW

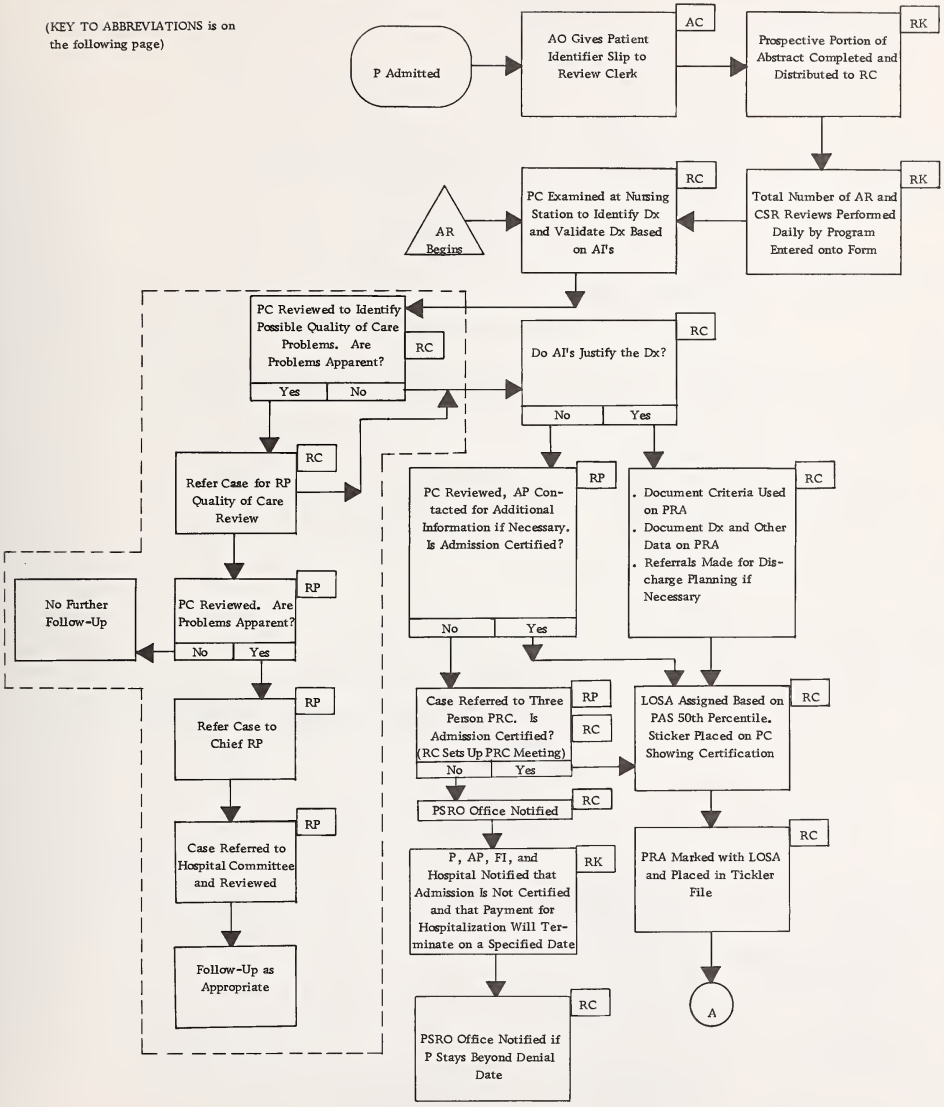
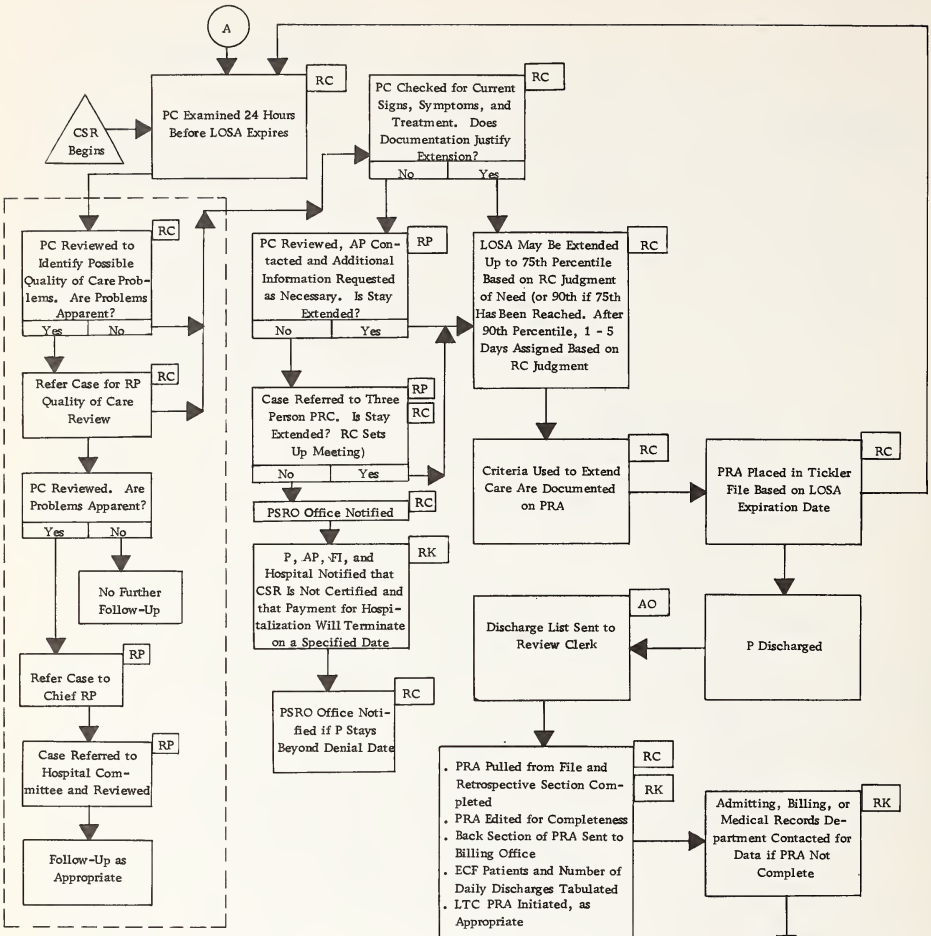

(KEY TO ABBREVIATIONS is on the following page)
P Admitted
AO Gives Patient Identifier Slip to Review Clerk
AC
Prospective Portion of Abstract Completed and Distributed to RC
RK
AR Begins
PC Examined at Nursing Station to Identify Dx and Validate Dx Based on AI's
RC
Total Number of AR and CSR Reviews Performed Daily by Program Entered onto Form
RK
PC Reviewed to Identify Possible Quality of Care Problems. Are Problems Apparent?
RC
Yes
No
Do AI's Justify the Dx?
RC
No
Yes
Refer Case for RP Quality of Care Review
RC
PC Reviewed, AP Contacted for Additional Information if Necessary. Is Admission Certified?
RP
No
Yes
. Document Criteria Used on PRA
. Document Dx and Other Data on PRA
. Referrals Made for Discharge Planning if Necessary
RC
No Further Follow-Up
PC Reviewed. Are Problems Apparent?
RP
No
Yes
Refer Case to Chief RP
RP
Case Referred to Three Person PRC. Is Admission Certified? (RC Sets Up PRC Meeting)
RP
RC
No
Yes
LOSA Assigned Based on PAS 50th Percentile. Sticker Placed on PC Showing Certification
RC
Case Referred to Hospital Committee and Reviewed
RP
PSRO Office Notified
RC
PRA Marked with LOSA and Placed in Tickler File
RC
P, AP, FI, and Hospital Notified that Admission Is Not Certified and that Payment for Hospitalization Will Terminate on a Specified Date
RK
Follow-Up as Appropriate
A
PSRO Office Notified if P Stays Beyond Denial Date
RC

FIGURE 7-IV(2)


A
CSR Begins
PC Examined 24 Hours Before LOSA Expires
RC
PC Checked for Current Signs, Symptoms, and Treatment. Does Documentation Justify Extension?
No
Yes
RC
PC Reviewed to Identify Possible Quality of Care Problems. Are Problems Apparent?
Yes
No
RC
Refer Case for RP Quality of Care Review
RC
PC Reviewed. Are Problems Apparent?
Yes
No
No Further Follow-Up
Refer Case to Chief RP
RP
Case Referred to Hospital Committee and Reviewed
RP
Follow-Up as Appropriate
PC Reviewed, AP Contacted and Additional Information Requested as Necessary. Is Stay Extended?
No
Yes
RP
Case Referred to Three Person PRC. Is Stay Extended? RC Sets Up Meeting)
No
Yes
RP
RC
PSRO Office Notified
RC
P, AP, FI, and Hospital Notified that CSR Is Not Certified and that Payment for Hospitalization Will Terminate on a Specified Date
RK
PSRO Office Notified if P Stays Beyond Denial Date
RC
LOSA May Be Extended Up to 75th Percentile Based on RC Judgment of Need (or 90th if 75th Has Been Reached. After 90th Percentile, 1 - 5 Days Assigned Based on RC Judgment
RC
Criteria Used to Extend Care Are Documented on PRA
RC
PRA Placed in Tickler File Based on LOSA Expiration Date
RC
P Discharged
Discharge List Sent to Review Clerk
AO
. PRA Pulled from File and Retrospective Section Completed
. PRA Edited for Completeness
. Back Section of PRA Sent to Billing Office
. ECF Patients and Number of Daily Discharges Tabulated
. LTC PRA Initiated, as Appropriate
RC
RK
Admitting, Billing, or Medical Records Department Contacted for Data if PRA Not Complete
RK
If Dx Not Available on Discharge, PRA Held Until Dx Entered by AP on PC and then Coded onto PRA
RC
RK
PRA's Batched by Discharge Month in Numbers of 25 and Transmitted to PSRO Data Coordinator
RK

KEY TO ABBREVIATIONS:

Personnel Involved in Incremental Tasks

AC = Admitting Clerk
AO = Admitting Office
AP = Attending Physician
CRC = Chairman, Review Committee
DMR = Director of Medical Records
ECF = Extended Care Facility
ED = Executive Director
FI = Fiscal Intermediary
HAP = Hospital Appeals Panel
IC = Insurance Clerk
MRC = Medical Records Clerk
P = Patient
PRAP = PSRO Regional Appeals Panel
PRC = Physician Review Committee
PQAC = PSRO Quality Assurance Panel
RC = Review Coordinator

Personnel (Continued):

RCP = PSRO Review Coordinator
RK = Review Clerk
RP = Review Physician
S = Secretary
SNF = Skilled Nursing Facility

PSRO Documents Used

PRA = PSRO Review Abstract

Other Abbreviations

AI = Admissions Indicators
AR = Admissions Review
Cd = Coders
CSR = Continued Stay Review
Dx = Diagnosis
LOSA = Length of Stay Assigned

Other Abbre. (Continued):

LTC = Long-Term Care
MR = Medical Records
PA = Patient Abstract
PAS = Professional Activities
PC = Patient Chart

minimum PSRO and Joint Commission on Accreditation of Hospitals (JCAH) requirements. Figure 7-V, Simple Medical Audit, following this page, illustrates the minimal medical audit. Characteristics include:

- The UR committee serves as the medical audit committee and no special medical audit committee exists
- A medical audit clerk extracts data from patient records and presents findings to the UR committee
- No systematic analysis is undertaken

In contrast, the more in-depth medical audit process illustrated by Figure 7-VI, following Figure 7-V, features the following:

- A special medical audit committee oversees the process, with responsibility for major aspects of the audit resting on a liaison physician
- A trained audit specialist such as a registered record administrator extracts, reduces, and analyzes data from patient records
- Extensive analysis of the findings is undertaken
- Follow-up procedures are incorporated within the process

Key areas of variation within the essential parts of the MCE process, as observed in sample hospitals, are as follows:

- Topic Selection--Methods include:
  - Selection from a PAS or other systems-generated list of the most frequent diagnoses
  - Use of a PSRO-mandated topic
  - Use of topics recommended by interested physicians
  - Combination of the above

FIGURE 7-V

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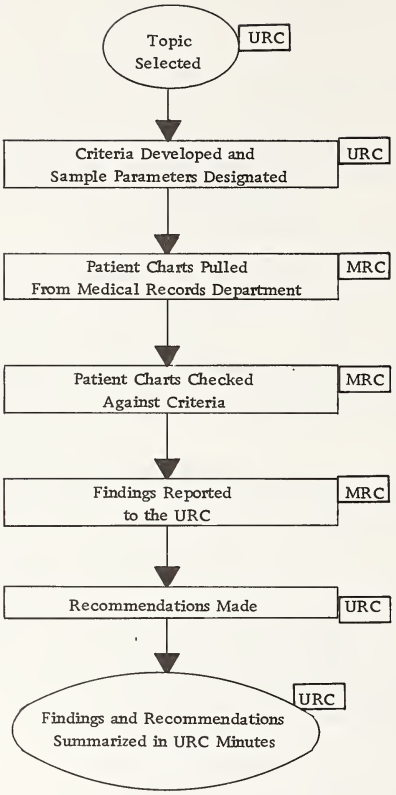
SIMPLE MEDICAL AUDIT PROCESS



KEY TO ABBREVIATIONS:

URC - Utilization Review Committee
MRC - Medical Records Clerk

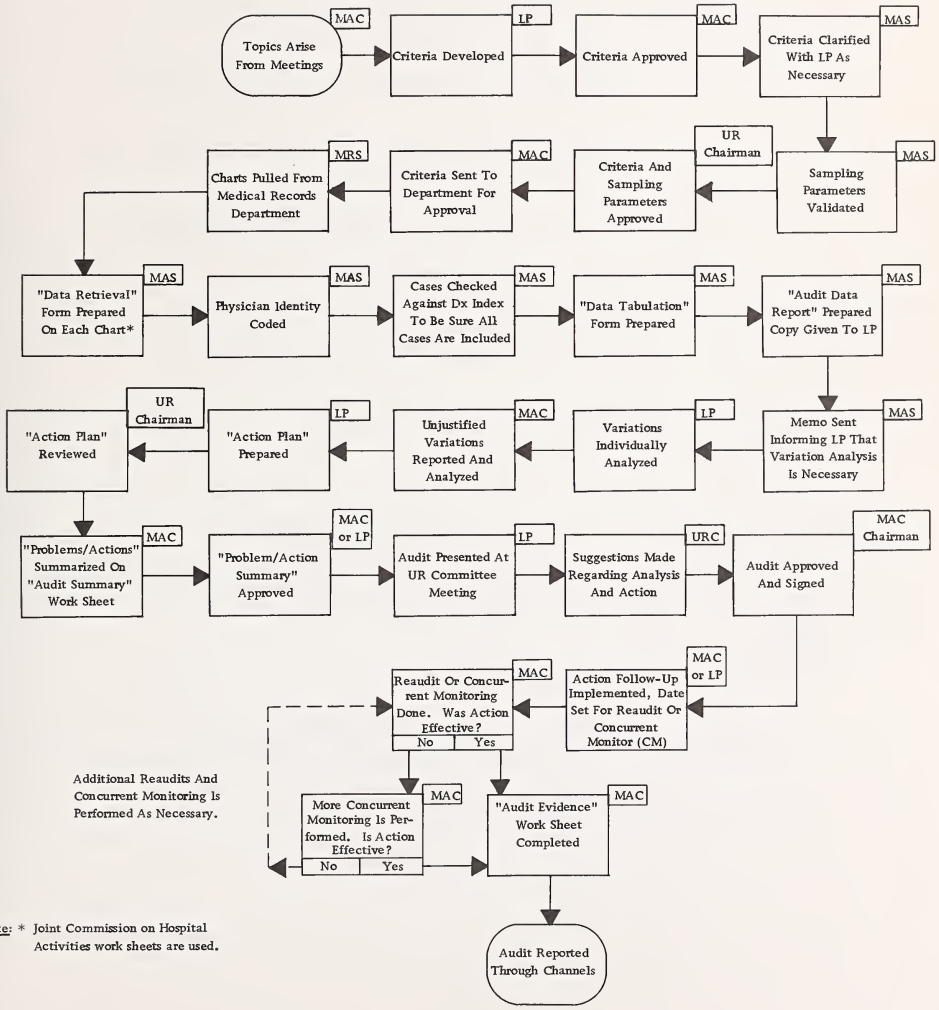
FIGURE 7-VI

Office of Planning, Evaluation, and Legislation

IN-DEPTH MEDICAL AUDIT

KEY TO ABBREVIATIONS:

CM - Concurrent monitoring
LP - Liaison physician
MAC - Medical Audit Committee
MAS - Medical Audit Specialist
MRS - Medical Record Staff
URC - Utilization Review Committee



Note: * Joint Commission on Hospital Activities work sheets are used.

- Criteria Development--Techniques include:

  - Development by committee
  - Use of externally developed criteria
  - Modification of externally developed criteria
  - Combination of the above

- Sample Selection--Practices include:

  - Use of all occurrences of a given diagnosis for a designated period

  - Use of computer-generated lists to assure a representative sample

  - Manual selection of a representative sample

- Data Analysis--Variations include:

  - Use of a simple tally of whether or not the cases met the various elements of the criteria

  - Use of a series of data extraction and reduction work sheets

Overall, medical audit practices appear to be in a period of continued development and there is a clear trend toward more comprehensive and detailed audits. In response to JCAH recommendations, many hospitals are in the process of incorporating evaluation of nursing services as part of their medical audits.

Interhospital coordination of audits was infrequently observed in the study. It was apparently hampered by the wide disparity in MCE approaches as well as by differences in acceptable medical practice patterns among hospitals.

7.5 Although Abstracts Were Completed In All Delegated Hospitals And Submitted To PSROs, Hospitals Reported PSRO Profiling Systems Rarely Provided Helpful Information

Although abstracting was being done in all PSRO hospitals visited, hospitals in only one area reported receiving useful profiles back from the PSRO on a regular basis. Some PSROs are working on this situation by training hospital staff in data reporting techniques. In addition, PSRO staff are assisting hospital personnel in learning how to interpret and use the profiles when they get them.

Looking at the input side of the profiling system, the project team observed three general approaches. The patient abstract data required by PSRO contracts were developed by:

- Use Of Existing Abstracts With A "Trailer Sheet"--Hospitals that had been abstracting patient charts before PSRO implementation often use a commercially available abstract that is now supplemented by an additional sheet, or "trailer," for the extra information required by the PSRO. In these hospitals, abstracts were usually completed for all patients, with the "trailer" portion being filled out for federal patients only.

- Preparation Of Dual Abstracts--In other hospitals that had been abstracting patient charts before the PSRO program was implemented, a new PSRO abstract has been added. In addition to the existing abstracts, hospital staff complete a unique PSRO abstract so that federal patients are being abstracted twice. Low morale was typical among abstractors in these "dual" abstracting situations.

- Preparation Of Unique Abstracts--In some situations, only PSRO-designed abstracts are prepared. In such cases, either no abstracting was completed prior to PSRO or the PSRO area has developed a uniform abstract that serves all current data needs.

7.6 UR Committees Performing A Variety Of Functions Were Found In Virtually All Sample Hospitals

Active, well-organized UR committees with specific functions and responsibilities existed in most hospitals. In rare cases, the UR committee consisted of a roster of physicians who never actually met as a group but only served rotations as review physicians. In most cases, UR committees existed prior to PSRO and their role was modified or expanded to incorporate PSRO activities when PSRO was implemented. Typical UR committee activities included:

- Determination of UR policies and procedures
- Oversight of concurrent review and medical care evaluations
- Chart review, including:
  - Problem cases
  - A small random sample of federal patients recently discharged
- Monitoring or completion of special UR studies

The size of UR committees in sample hospitals varied from 3 members to over 30. In very small hospitals, typical UR committees consist of a few physicians plus the review coordinator, whereas, in large hospitals, physicians representing all departments plus nonphysician representatives such as social workers, nurses, administrators, and medical records personnel might be included. Attendance at UR committee meetings varied widely from hospital to hospital and study field interviewers developed the feeling that attendance at UR committee meetings provides a measure of how seriously the overall UR program is taken in hospitals. Where there was high attendance at the UR committees, generally, the UR programs appeared strong.

7.7. A Variety Of Ongoing Administrative Activities In Hospitals Directly Support PSRO Program Operations

Typical hospital administrative activities related to management of the utilization review function include:

- Supervision Of UR Staff--In many cases, management of the PSRO program involves more than one level of supervision:
  - A senior review coordinator may supervise subordinate review coordinators and clerks
  - Heads of UR units supervise the range of UR activities
  - Hospital administrators oversee the UR unit
- Sponsorship And Conduct Of Workshops, Training, And Orientation--Numerous ongoing activities of this type involve significant personnel time in UR development and participation that cannot be related to specific UR activities.
- Preparation Of Reports--Compilation of statistics and reports in response to BQA and PSRO requests
- Initiation Of Special Projects--UR personnel were sometimes involved in projects such as:
  - Studies of how best to utilize hospital facilities
  - Studies of physician practice patterns
  - Studies to ascertain differences in care being rendered to federal versus nonfederal patients
- Coordination Of UR Activities With Internal And External Groups, Including:
  - Other departments within the hospital, such as admitting, social services, and medical records
  - Outside organizations, such as extended care facilities and third-party reimbursement organizations

7.8 PSRO UR Systems Are Far More Comprehensive Than Utilization Review Under The 1974 Medicare Regulations And Tend To Be More Comprehensive Than Utilization Review Under The 1976 Medicare Regulations

Utilization review under the 1974 Medicare regulations (old UR) was far simpler than PSRO-type review. Concurrent review, medical care evaluations, and abstracting and profile analysis elements were not typical in old UR programs. The level of activity under old UR encountered in sample hospitals ranged from nothing at all to systems that were very similar to current PSRO review. The typical old UR system involved a UR committee review of closed patient charts and, occassionally, a person checking patient charts for attending physician certification. Figure 7-VII, following this page, illustrates review components of an old UR system, including:

- Admissions reviewed for the presence of documentation
- Patient charts reviewed by a review coordinator at specific intervals for attending physician certification
- Physician review conducted only after a patient stays over 48 days
- Third-day extensions could be granted by a physician review committee

Review of the CR processes encountered for UR under the 1976 Medicare regulations (new UR) in the two control non-PSRO areas reveals systematic variation in the kinds of CR systems in these hospitals. Although all hospitals in the sample operated some type of CR process, a two-tiered system is apparent:

- Some hospitals, usually the larger ones, do UR, including CR, which closely resembles PSRO UR and appears to cover the majority of beds and inpatient days.
- Other hospitals, most often smaller ones, do a more superficial type of CR; however, they appear to account for approximately one-quarter of area beds and inpatient days.

FIGURE 7-VII

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TYPICAL OLD UR SYSTEM

KEY TO ABBREVIATIONS:

Personnel Involved In Incremental Tasks

AC = Admitting Clerk
PRC = Physician Review Committee
RC = Review Coordinator

Other Abbreviations

AP = Attending Physician
AR = Admissions Review
P = Patient
PC = Patient Chart

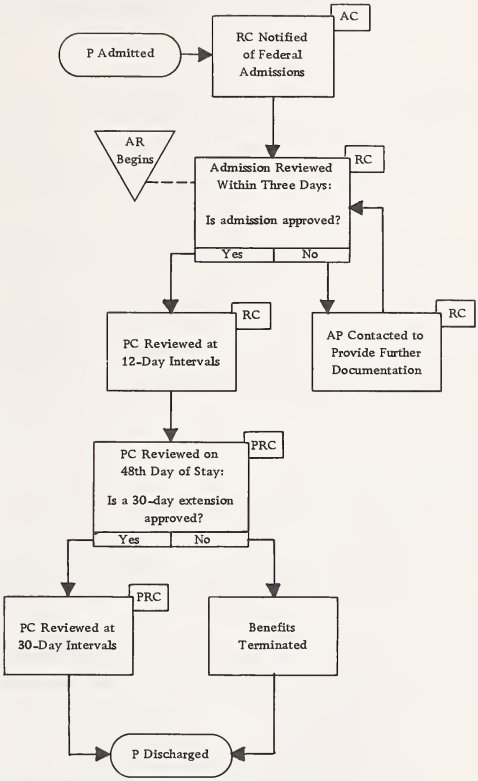


Figure 7-VIII, following this page, illustrates a typical strong new UR system, and Figure 7-IX, following Figure 7-VIII, shows the simpler typical weak new UR system. Generally speaking, hospitals did not fall in between; either they invest significant effort in UR under Medicaid regulations or they do not.

The typical weak new UR CR process has the following characteristics:

- Admissions review consists of identifying the admitting diagnosis. The diagnosis indicated is accepted uncritically.
- The length of stay is extended without question if the attending physician requests more days.
- Actual review of the medical necessity of hospitalization occurs in cases where the review coordinator feels the attending physician is making very clear errors (e. g., the attending physician has not seen the patient during the hospital stay).

In contrast, the typical strong new UR CR process has the following features:

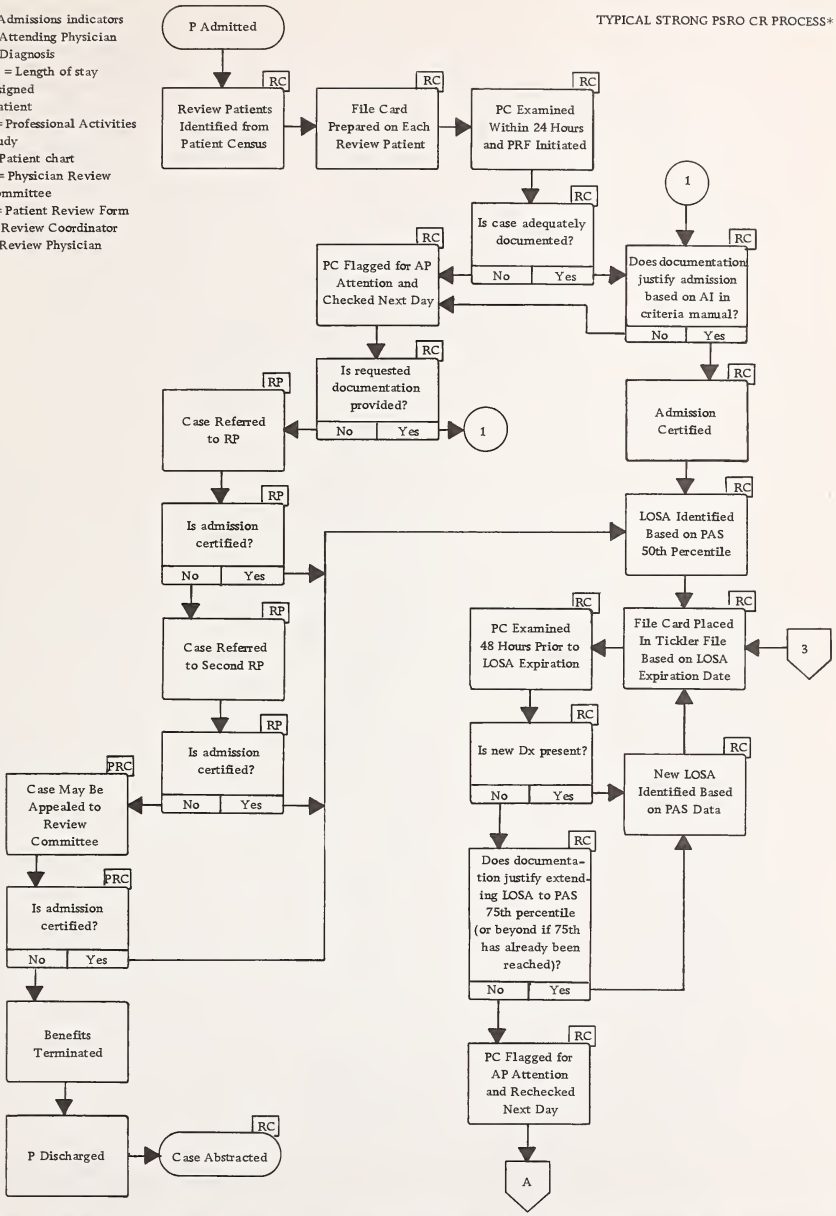
- An admissions review is conducted within a specified time period. The review coordinator has the option either to certify the admission or refer it to a review physician. The review coordinator may apply professional judgment or use formal criteria as an aid.
- At a specific time before expiration of the length-of-stay assignment (LOSA), the review coordinator reexamines the patient chart to decide whether the length of stay needs to be extended. The review coordinator may extend the length of stay or refer the case to a review physician, if it appears no additional days are needed. The decision is usually based on a combination of professional judgment and documented criteria.
- A review physician has authority to extend the stay or deny further benefits. Any denials are subject to the concurrence of the review committee if the attending physician appeals the decision.

FIGURE 7-VIII(1)

Office of Planning, Evaluation, and Legislation

TYPICAL STRONG PSRO CR PROCESS*

KEY: AI = Admissions indicators
AP = Attending Physician
Dx = Diagnosis
LOSA = Length of stay assigned
P = Patient
PAS = Professional Activities Study
PC = Patient chart
PRC = Physician Review Committee
PRF = Patient Review Form
RC = Review Coordinator
RP = Review Physician


P Admitted
RC
Review Patients Identified from Patient Census
File Card Prepared on Each Review Patient
PC Examined Within 24 Hours and PRF Initiated
Is case adequately documented?
No
Yes
PC Flagged for AP Attention and Checked Next Day
Is requested documentation provided?
1
Does documentation justify admission based on AI in criteria manual?
Admission Certified
LOSA Identified Based on PAS 50th Percentile
File Card Placed In Tickler File Based on LOSA Expiration Date
3
PC Examined 48 Hours Prior to LOSA Expiration
Is new Dx present?
New LOSA Identified Based on PAS Data
Does documentation justify extending LOSA to PAS 75th percentile (or beyond if 75th has already been reached)?
PC Flagged for AP Attention and Rechecked Next Day
A
RP
Case Referred to RP
Is admission certified?
Case Referred to Second RP
PRC
Case May Be Appealed to Review Committee
Benefits Terminated
P Discharged
Case Abstracted

Note: * Only the CR elements of the UR program are shown. They comprise 80 percent of the cost of review in PSRO hospitals (when abstracting is included). Other components of in-hospital PSRO programs which comprise the remaining 20 percent of in-hospital PSRO costs include Medical Care Evaluations, UR Committee, and direct administration.

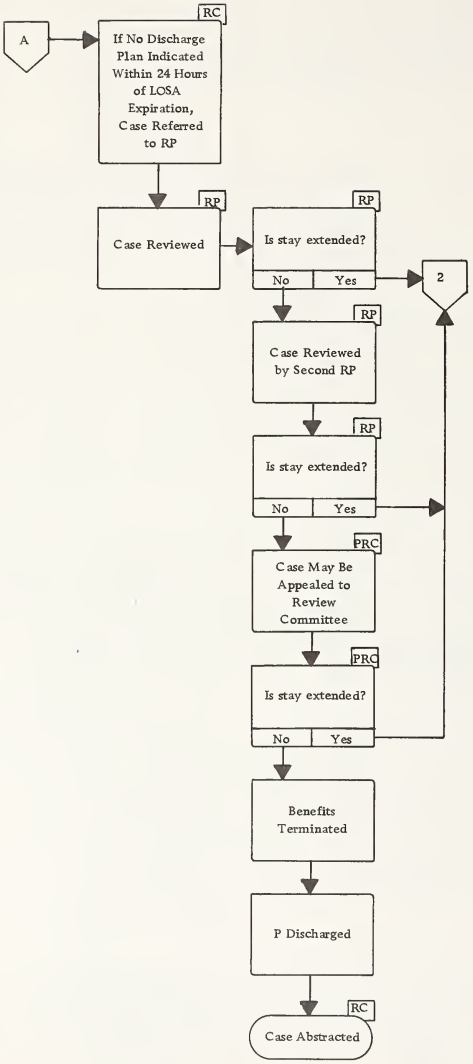
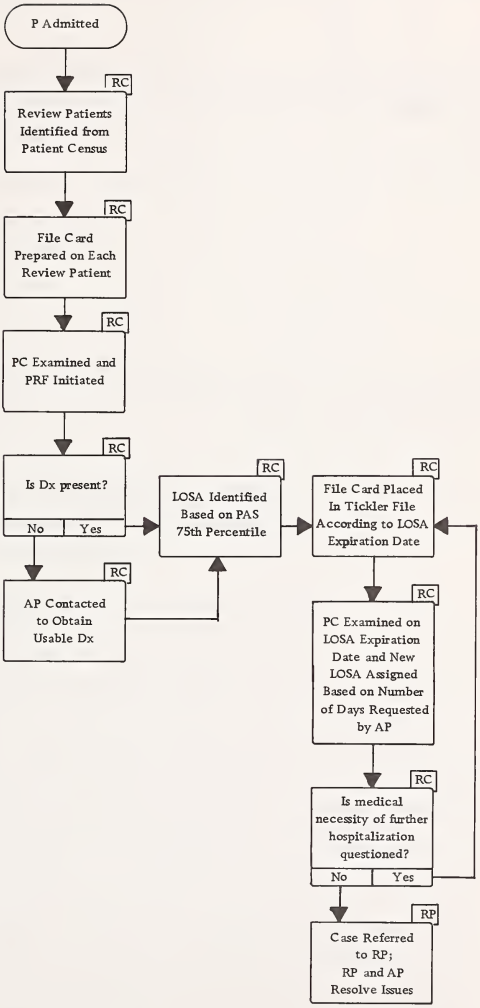

A
RC
If No Discharge Plan Indicated Within 24 Hours of LOSA Expiration, Case Referred to RP
RP
Case Reviewed
RP
Is stay extended?
No
Yes
2
RP
Case Reviewed by Second RP
RP
Is stay extended?
No
Yes
PRC
Case May Be Appealed to Review Committee
PRC
Is stay extended?
No
Yes
Benefits Terminated
P Discharged
RC
Case Abstracted

FIGURE 7-IX

Office of Planning, Evaluation, and Legislation

TYPICAL WEAK NON-PSRO CR PROCESS*

KEY: AP = Attending Physician
Dx = Diagnosis
LOSA = Length of stay assigned
P = Patient
PAS = Professional Activities Study
PC = Patient chart
PRF = Patient Review Form
RC = Review Coordinator
RP = Review Physician



Note: * Only CR elements are shown. Other UR program components of weak non-PSRO systems include Medical Audits (completed in 70 percent) and UR Committees (observed in all sample hospitals).

- After the patient is discharged, the medical record is abstracted (e. g., for PAS). Abstracts data are used to develop profiles of hospital practice patterns.

The study team reached its conclusion on new UR after examining flowcharts developed at all non-PSRO hospitals. CR activities observed in hospitals appeared to follow hospital size in that smaller hospitals tended to have weaker systems. See the chart below showing the percent of sample hospitals in the two control areas that had strong new UR systems:

	Southern Area	Central Area
$\leq$ 200 beds	40%	56%
> 200 beds	50%	100%

Extrapolating our observation to the universe of hospitals in these two areas for 1976, we found that:

- In the central control area, approximately 60 percent of the hospitals had CR in 1976. These hospitals include approximately 76 percent of the beds and 79 percent of the inpatient days for hospitals statewide.

- In the southern control area, approximately 40 percent of the hospitals had concurrent review in 1976. These hospitals include about 46 percent of total area beds and 46 percent of total inpatient days.

In summary, it appears that substantial CR activity occurred in non-PSRO areas, so they do not provide a comparison to PSRO areas where nothing at all was happening. These areas do provide approximations of what hospitals would be likely to be doing without the direct influence of PSROs. However,

the "threat" of PSRO may cause some hospitals to improve their new UR programs in the hope of keeping PSRO out. As a result, the level of effort observed in control areas may be higher than it would have been if PSRO did not exist at all.

7.9 PSRO Programs' Primary Emphasis Has Been On The Implementation Of Review And Techniques For Monitoring The Quality Of In-Hospital Review Activity Have Not Been Fully Developed

Study interviewers observed that PSRO level policy had a definite impact on what occurred in hospitals in PSRO areas (i.e., hospitals within each PSRO area tended to be alike, at least in the flow of the UR activities). However, very few hospitals indicated that PSRO staff review of their hospital UR operations had much influence on in-hospital UR activities. PSROs reported utilization of from 30 to 80 percent of their operating budgets for monitoring of hospital UR activities, but few procedures had been developed to ensure a thorough, objective PSRO review of hospital UR operations. Development of a meaningful PSRO monitoring program is hampered in most PSROs because the PSRO has little leverage on hospital staff. Since PSROs do not currently influence payment for PSRO-delegated review, they have no direct financial control over hospital UR employees and, indirectly, the activities of these employees.

The major emphasis of PSRO monitoring as described by sample PSROs is on two program areas: concurrent review and medical care evaluations. Site visits by PSROs to hospitals were the major technique used for monitoring concurrent review in the PSRO sample areas involved in the study. Visits were conducted "as needed," based on suspected problems, or at regular intervals such as biweekly, monthly, every six weeks, and quarterly. In those five cases observed in which PSRO review was conducted systematically rather than informally, site visit activities usually included examination of review forms in a random or representative sample of cases. These forms and patient abstracts were scrutinized along with patient charts to ascertain

if review coordinators were doing their job correctly. This scrutiny, where it existed, ranged from coverage of 10 percent of all cases, by means of completion of a worksheet, to intensive review of five randomly selected admission reviews and continued state review cases.

Some PSROs also sent teams out to observe hospital RCs on their rounds as a means of checking the adequacy of performance. In addition, review activity instruction manuals, regular meetings with RCs, and RC training sessions were reported as ways of assuring the program's quality. In some areas PSRO staff substituted in the hospitals when the RCs were on vacation. This was cited as a means of identifying review operation performance. Also, fiscal intermediaries provide monitoring input by identifying questionable cases on a retrospective basis that the PSRO then reviews as a means of in-hospital UR review. None of the PSROs indicated that they had evaluated the accuracy of patient abstracts received from hospitals or attempted to review the efficacy of UR committees or direct administration by hospitals. Also, profiles generated from patient abstracts were rarely used to evaluate review coordinator performance and effectiveness.

Various approaches were used by PSROs in monitoring Medical Care Evaluation studies which involved the use of both physician and non-physician personnel. In some PSROs, monitoring of MCEs consisted of a simple examination of the BQA forms completed by the hospitals. In other areas, MCE monitoring involved review of the actual audit report, review of the criteria used, review of exceptions identified, and justifications. Several PSROs had rejected audits that they believed were inadequate.

8.0 SUGGESTED INTEREST AREAS AND METHODOLOGIES FOR FUTURE COST STUDIES

8.0 SUGGESTED INTEREST AREAS AND METHODOLOGIES FOR FUTURE COST STUDIES

Topics of interest for possible future study that arose during the course of this project are identified and discussed in this chapter. The chapter addresses two different areas as follows:

- Topics of interest for further research
  - Influence of physician participation in concurrent review
  - Analysis of key variables in the PSRO UR process to establish their relationship to practitioner behavioral change
  - Continued use of the flowcharting technique developed in this study for PSRO and in-hospital UR analysis and review
  - Investigation of the cost-effectiveness of computer utilization in hospital PSRO UR programs
  - Identification of the current cost and cross analysis of costs of various UR program models for inpatients, including medical foundation and other organizational review of nonfederal patients
- Refinements to the interview guides used in this study should any part of this study be replicated in the future
  - Changes in the PSRO-level interview guide
  - Discontinue the differentiation between admissions review and continued stay review

- Abandon the acquisition of indirect cost estimates for hospitals unless more standardized cost accounting guidelines are adopted in practice

- Delete selective items from the hospital-level interview guide

8.1 Influence Of Physician Participation In Concurrent Review

Interviewers in this study observed a wide variation in the extent of review physician (also called physician advisor) involvement in CR programs in sample hospitals. Based on flowcharts developed of the review process, inquiries about UR personnel activities, and observation of the concurrent review process in actual practice review, physician scrutiny of patient charts is perfunctory (see Chapter 7 for a further discussion). Such limited physician involvement may effectively undermine the intention of PSRO as a "peer review" program, so further study of physician involvement would, therefore, be of interest from both a cost and a program effectiveness perspective. Questions suitable for further inquiry derived from this study's observations in the 90 sample delegated review hospitals include:

. How do different qualifications and methods of operation of review coordinators affect the role of the review physician? Interviewers encountered the following situations:

  - RPs assuming greater responsibility for the UR program where review coordinators of lesser qualifications are used

  - Strong RCs whose judgment is routinely approved by RPs

  - Weak RCs whose requests are ignored by RPs

. Does the informality of the relationship between review physicians and attending physicians typically observed in smaller hospitals affect the results of the UR program? Conversely, do the more formal relationships observed in

larger hospitals affect program success? For instance, where sanctions are used to encourage physician behavioral change, is greater success in modifying physician behavior achieved than in more informal situations?

- Does continuity in review physician involvement lead to better results than the use of many physicians for short periods of duty? Some UR personnel felt having one review physician who was knowledgeable about PSRO was good whereas others believed that use of review physicians on rotation increased both peer pressure and general understanding of the UR program.

Physician support and active involvement in the UR program are essential for program success. If the review physician's role and influence on program effectiveness were more fully understood, policy regarding utilization of physicians as reviewers could possibly be more clearly delineated.

8.2 Analysis Of Key Variables In The PSRO UR Process To Establish Their Relationship To Practitioners' Behavioral Change

Many different strategies and attitudes were observed by this study's interviewers, many of which may influence the success of PSRO UR. For instance, it has been suggested that a respected and enthusiastic review physician, supported by the administrator, is the cornerstone of UR program success. However, operations were observed that seemed to be successful due to strong review coordinators, despite the apparent disinterest of local physicians. A longitudinal study could be designed to identify which UR process and personnel attitudinal characteristics are associated with program effectiveness so that PSRO officials could try to build strengths in in-hospital UR programs where they are likely to have the greatest effect.

In such a study, review physician involvement would be measured based on total cases reviewed and the average time spent reviewing each case referred regardless of the number of referrals. An intensity of effort

measure could be incorporated based on the frequency with which review physicians consult worksheets, patient records, patients, and attending physicians and floor nurses. Review coordinator effort could be measured by the average time spent reviewing each case and the extent of the review, including examination of physician notes, nurse notes, admission criteria, extension of length of stay criteria, and checks to see whether ordered services were delivered. Initial data could also be collected on review coordinator, review physician, nurse, and attending physician attitudes toward PSRO UR.

Process measures to evaluate UR program effectiveness could include the number and frequency of attending physician changes in documentation resulting from UR review, changes in the number of documentation deficiencies following MCEs, changes over time in the average length of stay controlled for diagnosis and case complexity, and changes in review coordinator, review physician, nurse, and attending physician cooperation in the PSRO UR program.

8.3 Continued Use Of The Flowcharting Technique Developed In This Study For PSRO And In-Hospital UR Analysis And Review

The flowcharting technique employed in the study 1/ (as described in Appendix A, pp. II-1 through II-7) proved to be a valuable means of acquiring highly detailed process and cost data. Much was learned from comparative analysis of flowcharts that would otherwise be missed by use of a directed questionnaire alone. An emphasis on flowcharting in future studies could assist in:

1/ The flowcharting technique used involved the following key features:

- Nondirective interviewing
- Identification of the UR process task by task
- Identification of the personnel responsible for each UR task
- Cross validation of time estimates and task descriptions with several knowledgeable sources

- Explaining cost differences by relating them to process variations
- Identifying UR deficiencies and inefficiencies
- Identifying unusual and hidden UR costs
- Appraising UR program quality with respect to the following:
  - Extent to which the UR program requirements are followed
  - The qualifications of staff performing critical UR tasks
  - The amount of staff time spent in carrying out important UR activities
  - The extent to which key UR strategies are developed to deal with frequent, common problems in the review process

In addition, worthwhile and innovative UR procedures observed in reviewed hospitals can be identified for possible replication in other UR programs of other hospitals and PSROs.

Although flowcharts do not directly measure UR program impact, they can be effectively used to identify exactly what operating personnel are really doing and, therefore, can be used as a UR process auditing or monitoring tool. The use of flowcharts for such purposes requires careful planning, training, and assiduous dedication to the detailed specifications for the flowcharts. Without such effort, flowcharts developed by different individuals would lack the parallel construction required to make judgments as to comparative merits of different UR programs.

8.4 Investigation Of The Cost-Effectiveness Of Computer Utilization In In-Hospital PSRO UR Programs

Fewer than ten percent of sample hospitals observed in this study used computers to assist in their review programs. This does not mean, however,

that computer assistance could not be utilized to reduce repetitive work, to increase the overall efficiency of the UR programs, and to modify UR program costs. Many hospitals have been unwilling to consider a commitment to the development of software for UR purposes because they have been uncertain of the permanence of the PSRO program since its inception. With each year of life for the program, more hospitals are willing to investigate the possibility of computer assistance in UR programs.

Little is currently known about how computers could be used in UR programs and still less is known about the potential costs and benefits achievable through computer assistance. At this stage in UR program development, a study of the cost-effectiveness of computer utilization could provide the basis for BQA policy on computer use in the PSRO program nationally. For instance, computer systems development would be a waste of program funds if computers did not ultimately provide sufficient advantage; or, if computers are helpful, review personnel's efforts might be wasted (also wasting program funds) on activities that could be completed more efficiently electronically. The key issue, of course, is the cost-effectiveness of computer use in in-hospital UR programs.

Where computers were used in sample hospitals, the following applications were observed:

- Preparation of lists of patients to be reviewed, including their location in the hospital, pay status, assigned length of stay, etc.
- Creation of UR documentation and documents based on admissions information
- Assignment of "length of stays" through on-line PAS data

- Identification of representative samples of cases for MCE studies based on diagnoses. One system even included a full data bank of patient record abstracts useful in completing general MCEs or identifying very specific types of problems for more focused MCEs.

- Description of practice patterns of physicians based on patient abstract data

Since substantial sums could be invested in computer systems development even for some of the simpler applications described above, there is a need for national policy guidelines on the types of computer applications and their costs that may be used by individual hospitals in their UR programs.

8.5 Identification Of The Current Cost And Analysis Of Costs Of Various UR Program Models For Inpatients, Including Medical Foundation And Other Organizational Review Of Nonfederal Patients

UR activity was observed during the course of this study that is independent of the demands of federal regulations. For instance, in several of the sample PSRO areas, medical care foundations coordinated or completed UR for inpatients, ambulatory patients, and sometimes for long-term care patients not covered by the PSRO. Because the foundations were organizationally independent of the PSROs (although often closely related), the current study did not investigate the extent of foundation UR activities or expenditures.

Analysis of UR programs operated separately but impacting on the same health care providers is potentially important for two reasons:

- Changes in patient activity and costs are sometimes compared between federal and matched nonfederal patients. In areas where nonfederal review is conducted by an organization independent of the PSRO, the impact of PSRO review can only be measured in relation to programs managed by these other groups. Generalizations could not be made in the course of the present study as to the impact of PSRO review versus review by independent organizations

in the same area. Without identifying the extent of UR completed by other organizations in a given area, it is impossible to tell whether comparisons could be made that would assist in PSRO UR program evaluation.

- The current cost of UR activities for nonfederal patients must be deducted from the estimated cost of review for all patients when the incremental cost of a 100 percent review program is considered. To assess the net incremental cost of a full review program accurately, the current cost of all UR activity that would be displaced must be known, and this activity is often conducted by non-PSRO organizations.

In addition, the non-PSRO UR effort currently in existence may represent a political stumbling block for future PSRO program implementation. Strained feelings were observed during several PSRO site visits because some PSROs, with the backing of the Federal government, are taking over federal UR program activities that were formerly the responsibility of medical foundations, with a restriction of opportunity for the independent foundations.

8.6 Suggested Refinements In Interview Guides Used In The Study Should The Study Be Replicated

Generally speaking, the PSRO-level interview guides developed for this study were used without any significant problems. In future studies, however, special care should be exercised to refine precisely stated definitions for any activity data to be collected, e.g., number of admissions, number of patients receiving admissions review, etc. Experience at the 12 sample PSROs indicated that, although each PSRO uses the same terms for these activities, they often employ definitions of these terms that are unique to their situation. For instance, all reviews completed after the patient has been discharged are called "retrospective" by some PSROs, whereas other PSROs call reviews "concurrent" if they are performed within 24 hours or so after discharge. Also, some PSROs follow BQA 121 form definitions for number of federal discharges, (i.e., the number of discharges reviewed are counted), whereas other PSROs count all federal discharges regardless of review status.

When developing unit cost data, these basic definitional differences can result in substantial errors. Therefore, should the present cost study be replicated, we recommend that a complete set of detailed activity definitions be developed and used in a prospective study. Or, if a retrospective study, at least it should be completed in PSROs and hospitals using similar definitions determined in advance of data collection. It appears this is the only way to ensure that all data collected are based on comparable definitions.

8.7 Discontinue The Differentiation Between Admissions Review And Continued Stay Review At The Hospital Level

The differentiation of admissions review (AR) and continued stay review (CSR) appears to be somewhat forced, from both a cost and a process standpoint, for the following reasons:

- In practice, AR and CSR are usually conducted simultaneously as the review coordinator (RC) makes rounds. As a result, although review coordinators could identify the time they spent doing concurrent review (CR) with great precision, they were very uneasy about allocating it between AR and CSR.

- The same tasks are needed to support both AR and CSR. There is no clear way to allocate the time spent in identifying patients, completing initial patient forms, sorting review documents by patients' location in the hospital, screening discharged patients from the system, etc. As a result, the numerator figure for AR and CSR in unit cost calculations is weaker than the total figure for CR.

- Figures in the study for the number of reviews completed often had to be estimated for CSR. Thus, for CSR unit cost figures, both the numerator and the denominator are weak.

Further, if AR were dropped from the program, the cost of CSR would rise because certain functions in AR would have to be completed for CSR. For instance, patient identification, preparation of forms, checks for documentation, and identification of length of stay are, in effect, necessary

preliminary steps in CSR. Collecting costs only for concurrent review as a unit would thus save time and frustration, whereas it would sacrifice only data on the rather cloudy distinction between costs of AR and CSR.

8.8 Abandon The Acquisition Of Indirect Cost Estimates For Hospitals Unless More Standardized Accounting Guidelines Are Adopted In Practice

A number of problems were encountered by interviewers in attempts to obtain hospital indirect cost rates:

- Differing hospital accounting practices resulted in widely varying indirect rates because the definitions used for many of the cost centers varied radically. As a result, the basis of the indirect rate calculation was not parallel from hospital to hospital. The indirect cost rate appears to reflect the level of effort exercised by hospital accounting departments to "direct cost" expenses more than it reflects a true picture of hospital indirect costs.

- Hospitals were often reluctant during the study to release the necessary information to develop the indirect cost rate. Frequently, obtaining the "Trial Balance and Reclassification of Expenses" from the SSA Form 2552, which was the basis for indirect cost calculation, involved internal clearances and delays.

- When the indirect rate calculated for the study differed from what hospitals felt was their "correct" indirect rate, lengthy philosophical discussions often occurred about what the definition of indirect cost should be, how it should be applied in the hospital, and whether the full hospital indirect cost should be applied to the PSRO UR cost center without making special adjustments.

In summary, identification of indirect cost rates often causes delays in the data collection and yields data of questionable validity. Thus, little useful information would be lost in eliminating the indirect cost portion of the study and considerable time and effort could be saved. Only if standard accounting principles for indirect rate determination are applied in practice will indirect figures provided by hospitals be meaningful in any study.

8.9 Several Items Should Be Deleted From The Hospital Interview Guide In Any Replication Of This Study

Where reliable figures for certain data elements were consistently unavailable at hospitals and were not considered crucial in the present study, their collection in any future study should be deleted. Problems were consistently encountered with the following:

- Maternal and Child Health Figures (3.(1)f, 4.(2)g, 4(3)d)[1/] -- In most cases, MCH figures were not available, even where other documentation was present.

- Numbers of Outpatient Visits (3(1)f)--These figures were not collected by hospitals in a uniform manner. (See Detailed Methodology).

- Numbers of Referrals and Denials (4(2)g, 4(3)d--These were frequently unavailable. Most often, estimates were used.

- Breakdowns of Numbers of Referrals and Denials Into Patient Pay Categories (4(2)g, 4(3)d)--An additional margin for inaccuracy is encountered where estimated breakdowns are used with estimated figures. As indicated above, identifying the number of referrals or denials was often an estimate, so breaking them down by Medicare provides still less accurate figures.

- Trends in the Numbers of Referrals and Denials (4(2)j, k, l, and 4(3)h, i, j)--Asking the respondents to comment on trends on these vague figures usually was confusing and, thus, inappropriate.

- Old UR Data (Exhibit IV)--At the time of the study, respondent recollection of old UR practices was, at best, vague. Passage of time between this study and any replication would further decrease the reliability of any old UR (UR under 1974 Medicare regulations) data collected.

Should the study be replicated, the above items should be deleted from the hospital interview guide.

1/ These numbers identify the item's location in the interview guide in Appendix B.

GLOSSARY OF SELECTED TERMS AND ACRONYMS

GLOSSARY OF SELECTED TERMS AND ACRONYMS

Abstract--A data collection form used to record selected information about a hospital episode of a patient.

Adjustment--A change in the LOS assigned the patient based on a change in the criteria used to assign the LOS.

Admission--The formal acceptance by a hospital of a patient who is to be provided with room, board, and continuous nursing service in an area of the hospital where patients generally stay at least overnight.

Admissions Certification--Synonymous with Admissions Review under New Utilization Review (UR) requirements (see Admissions Review, PSRO, Review, below).

Admissions Indicator (AI)--Symptoms which should be documented in order for an admission to be certified.

Admissions Review (AR)--An element of health care review consisting of a determination of the medical necessity and appropriateness of a patient's admission to the hospital level of care. AR under new and old requirements may be characterized as follows:

- Old UR--The retrospective or concurrent review of admissions on a sample or other basis based on diagnostic categories.
- PSRO Review--The concurrent review of all Medicube admissions based on diagnosis-specific, written criteria and standards for the necessity of admissions.

AR--Admissions Review

BQA--Bureau of Quality Assurance, HCFA, HEW

Challenge--The appeal process when the reviewing physician recommends denial of medical services to a given patient whereas the attending physician feels there is medical necessity for admission or continued stay.

Concurrent--Activities begun within one working day of the activity of interest (i.e., admission or expiration of the specified length of stay) and completed shortly thereafter.

Concurrent Review (CR)--A form of health care review consisting of Admission Certification and Continued Stay Review, both on a concurrent basis.

Confidentiality--A policy that must be realistic and viable and that each PSRO must adopt for handling sensitive information with efficiency and minimal disclosure.

Continued Stay Review (CSR)--An element of concurrent health care review completed by personnel not professionally involved with the case during a patient's hospitalization, consisting of a determination of the medical necessity and appropriateness of continuation of the patient's stay at a hospital level of care. It may also include a detailed assessment of the quality of care being provided. The hospital UR plan specifies diagnosis-specific lengths of stays for each patient, before the expiration of which the patient must receive ESR. ESR should not be confused with "physician certification/recertification" of the need for hospital level, or continued hospital level, care, which must be completed by the physician responsible for the patient. Certification is required no later than the 12th day, and recertifications are required no later than the 18th day and, thereafter, not more than every 30 days of any Medicube beneficiary hospitalization. EDR may be used by the hospital to substitute for physician recertification, but recertification is not acceptable in place of EDR.

Cost Center--A department of subdivision thereof, a group of machines or of persons or both, a single machine and its operating force, or any other unit of activity identified in the accounts for purposes of cost assignment and allocation.

CPHA--Commission on Professional and Hospitals Activities.

Criteria--Predetermined elements of health care against which aspects of the necessity, appropriateness, or quality of a health care service may be compared.

CSR--Continued Stay Review.

Data Processing Costs--See Electronic Data Processing Costs.

Day (Of Stay In Hospital)--A 24-hour period or fraction thereof in a hospital episode. Days of stay are calculated on the basis of patient admission and discharge dates, counting the day of admission or the day of discharge but not both. Note that a patient not staying overnight has a stay of one day.

Delegation--The formal process by which the PSRO, based upon an assessment of the willingness and capability of a hospital to perform PSRO review functions effectively, assigns the performance of specified PSRO review functions to a hospital. Delegation must be agreed upon in a written memorandum of understanding signed by both the PSRO and the hospital. Delegation can be either:

- Partial Delegation--Delegation of only one PSRO review function or only a portion of a review function.

- Full Delegation--Complete delegation of both Concurrent Review and MCE studies to a hospital. The PSRO monitors the hospital's performance of these two review functions but does not conduct them; the PSRO retains responsibility for the effectiveness of the review.

Denial--A formal decision by a PSRO or a delegated hospital that all or part of a patient's hospital stay or proposed hospital stay is medically unnecessary and/or inappropriate. A patient is considered to have received a "denial" if formal notification of termination of services is given.

Direct Cost--An expense that can be conveniently and economically identified with a cost center or other unit of activity. For this study, Direct Costs are costs that can be specifically related to or caused by hospital review functions. For example, the amount paid to a Review Coordinator for performing Concurrent Review is a Direct Cost of hospital review. An amount of hospital engineering costs allocated to a Cost Center for hospital review would not be considered a Direct Cost of hospital review.

Discharge--The termination of a period of inpatient hospitalization through the formal release of the inpatient by the hospital. Deaths are included in discharges, newborns are not.

Donated Physician Hours--Time committed to any aspect of UR by a doctor of medicine or osteopathy that is not reimbursed. A physician on the hospital staff working in the UR area is considered paid. A physician who "donates" time in exchange for hospital privileges is considered not paid.

EDP--Electronic Data Processing

EDR--Extended Duration Review

Electronic Data Processing Costs--Costs for (a) preparing data in a form that can be read by a computer (excluding costs of initially filling out a mark-sensitive or optically scannable form); (b) doing computer tabulations or

manually checking forms to determine whether there are errors in the data; (c) correcting errors that are discovered; (d) processing data and producing outputs; and (e) keeping track of forms, cards, and/or computer tapes during each of the four activities listed above.

EMCRO--Experimental Medical Care Review Organization--precursors to the PSRO program.

Episode--A continuous period of stay in a hospital, beginning with admission and ending with discharge, whether or not a full night is spent in the hospital.

ESR--Extended Stay Review.

Essential Services--Procedures and reviews recommended for a given diagnosis. The recommended "essential services" are checked against services received in some hospitals.

Extended Duration Review (EDR)--An Old UR review function, performed by personnel not professionally involved in a case, to determine whether further inpatient hospital services are medically appropriate and necessary. The hospital UR plan specifies the number of continuous days of stay permitted before EDR must occur. EDR must be completed either on a retrospective or concurrent basis on all Medicube patients in the hospital beyond the specified length of time. EDR should not be confused with "physician certification/recertification" of the need for hospital-level, or continued hospital-level, care, which must be completed by the physician responsible for the patient. Certification is required no later than the 12th day, and recertifications are required no later than the 18th day and, thereafter, not more than every 30 days, of any Medicube beneficiary hospitalization. EDR may be used by the hospital to substitute for physician recertification, but recertification is not acceptable in place of EDR.

Extended Stay Review (ESR)--Synonymous with Continued Stay Review (CSR). See Continued Stay Review for details.

Extension--A continuation of hospital stay beyond a length of stay previously certified.

Federal Patients--Patients for whom an expected principal source of payment is Medicare (Title XVIII), Medicaid (Title XIX), Maternal and Child Health or Crippled Children's Services (Title V).

Federal Reimbursement Guidelines--Guidelines for reimbursement of PSRO UR and PSRO-level activities developed jointly by the Bureau of Quality Assurance and the Bureau of Health Insurance. These guidelines were provided on PSRO Transmittal 46, dated March 11, 1977.

Fiscal Year--The accounting year of the hospital.

Fringe Rate--See Salary Fringe.

FTE--Full-Time Equivalent.

Full-Time Equivalent (FTE)--The total number of hours worked in a year divided by the number of regular working hours in the period, based on a 40-hour work week. For the purposes of this study, one FTE will be equal to 2,080 hours.

Indirect Cost--An expense that cannot be readily identified with a cost center or other unit of activity but, generally, is an expense common to several or all activities.

Length Of Stay (LOS)--The number of calendar days from admission to discharge for a particular patient. The average LOS is computed by dividing the sum of all patient days by the total number of discharges.

LOS--Length Of Stay.

Length Of Stay Assigned (LOSA)--A given number of days assigned to patients based on medicine diagnoses and symptoms.

MCH--Maternal and Child Health Program (Title V).

Medical Care Evaluation (MCE) Studies--A type of retrospective medical care review in which an in-depth assessment of the quality and/or the nature of the utilization of health care services is made.

Medical Review--The precursor to the MCE. An in-depth retrospective medical care assessment of the quality and/or nature of hospital services or facilities.

Medicube (Or Federal) Patient--Patients for whom an expected principal source of payment is Medicare (Title XVIII), Medicaid (Title XIX), or Maternal and Child Health or Crippled Children's Services (Title V).

MR--Medical Review.

New UR--Utilization Review completed with the intention of complying with Medicare UR regulations (20 CFR 405, 1035) as amended November 29, 1974. New UR includes Concurrent Review, MCE Studies, and Profile Analysis.

Nonfederal Patients--Patients for whom Medicare, Medicaid, Maternal and Child Health, or Crippled Children's Service is not an expected source of payment.

Norm(s)--Numerical or statistical measure(s) of usual observed performance (e.g., LOS Norms).

Old UR--Utilization Review completed with the intention of complying with Medicare UR regulations (20 CFR 405, 1035) as they stood prior to November 29, 1974. Old UR includes Admissions and Extended Duration Review, usually done on a retrospective basis. Medical Reviews and Profile Analysis were also sometimes a part of UR.

OPEL--Office of Planning, Evaluation, and Legislation, HSA, HEW.

Other Audits--Audits for ancillary services and audits directed at other than medical or nursing topics.

Other Personnel--Personnel not trained in medicine, such as secretarial, keypunch, and administrative staff.

PA--Profile Analysis.

PAS--Professional Activities Study, a patient data abstracting service.

Patient Days--The sum of the "days of stay" for all patients.

Physician--A doctor of medicine or osteopathy.

Physician Advisor (PA)--Synonymous with Review Physician (RP). See Review Physicians for details.

Pre-Admission Certification--A form of health care review that occurs prior to a patient's admission to a hospital and consists of a determination of the medical necessity and appropriateness of the patient's admission to a hospital level of care.

Profile--A presentation of aggregated data in formats that display patterns of health care services over a period of time.

Profile Analysis--A form of retrospective review in which aggregated patient care data are subject to pattern analysis.

PSRO--Professional Standards Review Organization.

PSRO Review--In-hospital review activity completed in compliance with PSRO requirements under the supervision of a conditional or operational PSRO. PSRO review is almost identical to "new UR;" however, greater effort is required in the completion of MCE's. See definition of "Utilization Review" for a statement of the goals of PSRO review and UR.

Quarter--Any three-month time period.

Received AR--A patient has "Received AR" when Admissions Review activities have been undertaken culminating in approval/certification of the admission or in a denial of admission.

Received CSR--A patient has "Received CSR" when Continued Stay Review activities have been undertaken culminating in approval or denial of continued stay (same as "Received EDR").

Received EDR--A patient has "Received EDR" when Extended Duration Review activities have been undertaken culminating in approval or denial of the extended stay (same as "Received CSR").

Retrospective--Activities begun and completed after the patient has left the hospital or substantially after the activity of interest (e.g., admission or expiration of the specified length of stay) has occurred.

Review Coordinator--A member of the hospital staff (for Old UR) or staff of the PSRO or delegated hospital with one or more of the following responsibilities: conducting Concurrent Review; collecting data for Concurrent Review, MR, or MCE Studies; initiating or coordinating with discharge planning; recording and transmitting review decisions; completing reports on review decisions; completing reports on review activities; or acting as liaison with persons and organizations participating in and affected by the UR or PSRO review system. Individuals with different backgrounds may perform Review Coordinator duties, for example, medical record librarians, medical records clerks, medical corpsmen, or nurses. In many instances, this person's duties are performed on a part-time basis. In providing work-load and cost data on Review Coordinators, information should be provided for all the time that each person in each facility in the area spent performing Review Coordinator duties but should exclude information on time spent performing other duties.

Review Physician (RP)--A physician who provides consultation to nonphysician reviewers on the appropriateness, quality, and/or necessity of an individual's admission to or continued stay in a hospital.

Review Plan--A PSRO Hospital Review Plan is an integrated system of review including concurrent review, medical care evaluation studies, and profile analysis.

Salary Fringe--Those personnel costs incurred by the hospital beyond the salary costs paid to the employee. Often expressed as a percentage of the employee's salary.

SSA--Social Security Administration.

Standards--Professionally developed expressions of the range of acceptable variation from norm or criterion.

Technical Personnel--Professional personnel (excluding Review Coordinators) working in a technical support capacity to the review operation (e.g., accredited record technician, director of information systems, health data analyst, statistician, etc.).

Title V--The part of the Social Security Act that established the Maternal and Child Health Program and Crippled Children's Service, which provide health programs for mothers and children.

Title XVIII--That part of the Social Security Act that established the Medicare program, which provides federal health insurance to the aged and disabled.

Title XIX--That part of the Social Security Act that established the Medicaid program, which provides federal and state health benefits to those on welfare and, at state option, the medically needy.

Transmittal 46--See Federal Reimbursement Guidelines.

UR--Utilization Review.

Utilization Review (UR)--Review of patient data and/or medical records, with the objective of maintaining high quality care, increasing the effectiveness of the utilization of hospital and professional services, and certifying the necessity of use or continued use of the hospital level of care. UR requirements under Medicare regulations have evolved from "Old UR" to "New UR," and a wide variety of approaches has been developed to comply with these regulations.

Working Day--At least any of the days Monday through Friday or, at a minimum, any five days of each week, at the option of the PSRO or hospital, excluding holidays observed by the PSRO or hospital.

APPENDIX A

DETAILED EXPLANATION OF METHODOLOGY FOR THE HOSPITAL LEVEL STUDY

DETAILED EXPLANATION OF METHODOLOGY FOR THE HOSPITAL-LEVEL STUDY

This section is intended to provide further clarification on aspects of the methodology not covered in Chapter 30 of the final report. Topics covered in this section include:

- Sample size determination for hospital sample selection
- Data collection strategy
- Training and supervision of field interviewers
- Detailed discussion of in-hospital cost

1. DETERMINATION OF THE HOSPITAL SAMPLE SIZE WITHIN EACH SAMPLE AREA WAS BASED ON STANDARD STATISTICAL PROCEDURES

Selection of PSRO and non-PSRO sample areas were described in Section 3.1 of this report. Three of the 12 PSRO areas used were predominantly delegated, so no hospitals were visited in them. (Hospital costs could be identified at the PSROs in these cases because almost all UR effort was completely by PSRO personnel.) Samples of hospitals were visited in the remaining nine PSROs and in two non-PSRO areas. The sample size determination and the selection procedures are described below.

Within each sample area, a stratified random sample was chosen based on hospital bed size and teaching status characteristics as identified by the American Hospital Association Guide to the Health Care Field (1976). These variables were used in this project based on the results of two independent studies relating hospital costs to a wide variety of hospital and area characteristics (Kosnick[1/] and Berry[2/]).

Because hospital costs were expected to approximate a normal distribution (and were later shown to fall as expected--see Chapter 6.0 of this report), commonly accepted methods for the estimation of the required sample size can be used.[3/]

1/ Kosnick, Richard. Methodology and Empirical Validation of a Multidimensional Hospital Classification Structure (an unpublished thesis), 1976. Northwestern University, School of Public Health.

2/ Berry, Ralph E. "Cost and Efficiency in the Production of Hospital Services," Health and Society, Summer, 1974, pp. 291-312.

3/ In addition to the stratification variables, hospital control, level of services provided, per capita income in the hospital's area, and the ratio of outpatient units to inpatient days (as defined by Berry or Kosnick) were also identified on site visits to determine their associations with UR program costs.

The sample size required for estimation of a population mean was calculated based on the following interrelated variables.

- Precision Level Desired--The precision level is identified by "e" in the equation below and indicates how close we wanted the sample mean to be to the true population mean. For instance, selection of e = $1.00 signifies that we wanted to know that the true population mean lies in the interval, mean plus or minus one dollar. Higher or lower values for "e" could have been selected.

- Confidence Level Desired--A statistic identifying the confidence level selected is represented by "t" in the equation below. The confidence level desired is the probability that the true population mean in fact lies within the interval identified by the precision level. If a confidence level of 90 percent is desired, "t" is set to correspond to the number of standard errors of the mean that are required to include 90 percent of the area under a normal curve. For sample size determination a pretest was completed on 7 hospitals so, with 6 degrees of freedom, the "t" statistic used was 1.94.

- Population Standard Deviation--The standard deviation (σ in the equation below) identifies the extent of variation of costs at individual hospitals expected about the true population mean. Because the true standard deviation was unknown, a pretest using seven hospitals was completed to develop an estimate of the expected variation. The estimated standard deviation was $2.70.

These above three factors are related to one another in the following way:

$$\left[\begin{array}{c}\text{Required}\\ \text{Sample}\\ \text{Size}\end{array}\right] = \left[\frac{\text{Multiple of standard errors corresponding to the desired probability of obtaining the precision level}}{(\text{Desired precision level})^2}\right]^2 \left[\begin{array}{c}\text{Estimate of the}\\ \text{population standard}\\ \text{deviation}\end{array}\right]^2$$

OR

$$n = \frac{t^2 \sigma_x^2}{e^2}$$

Because the concurrent review is the largest component of the cost of PSRO UR, constituting about 60 percent of total cost, it was selected as the unit to develop sample size requirements. Study pretest data identified a mean unit cost of CR at $6.51 per federal discharge with a standard deviation of $2.70.[4/]

Thus, using the example values above, we find that:[5/]

$$n = \frac{(1.94)^2 (2.7)^2}{(1)^2} = 27.4 \backsim 27 = n$$

After systematically varying the size of "e" and taking into consideration the funds required to make each additional site visit, an n of 14 was selected, such that:[6/]

$$n = 14 \backsim \frac{(1.77)^2 (2.7)^2}{(1.28)^2}$$

Because the mean for CR was 6.51, the precision level achieved was expected to be a minimum of plus or minus 20 percent, (i.e., e = 1.28).

Special consideration had to be made for certain target PSRO areas, however, because they had a relatively small population of hospitals. In such areas, the desired confidence and precision levels can be achieved by going to less than 14 hospitals. (In fact, some areas had less than 14 hospitals, so 100 percent confidence could be achieved.) To adjust for smaller PSRO areas, the finite population correction factor was applied as follows:

$$\begin{bmatrix}\text{Corrected Sample size in specific area}\end{bmatrix} = \begin{bmatrix}\text{Standard sample size required}\end{bmatrix} \times \begin{bmatrix}\text{Finite population correction factor}\end{bmatrix}$$

OR

$$n(\text{corrected}) = n\left(1 - \frac{n}{N}\right), \text{ where } N = \text{total hospitals in the area}$$

Using the above formulae, the study team calculated all sample size requirements in the sample areas.

Once sample size was calculated, selection proceeded on a random stratified basis. Large hospitals, i.e., over 200 beds, generally needed to be oversampled in each area because, although they represented only a small portion of the total hospitals in some areas, they included a very high proportion of total

---

4/ The variation around the unit total cost of PSRO UR per discharge was slightly smaller than that identified for CR above. Had the unit total cost figure been used, sample size requirements, therefore, would have been slightly smaller.

5/ Computed with six degrees of freedom using a two-tailed test.

6/ Computed with 13 degrees of freedom using a two-tailed test.

inpatient days. (Ultimately, the study found that hospital size and number of discharges were not related to the unit cost of UR.) Within each size stratum, teaching hospitals were selected in proportion to their incidence in the area. Final selection was made using a random numbers table in the following sample cells:

- Large teaching
- Large non-teaching
- Small teaching (if any)
- Small non-teaching

Initial hospital contacts are described below.

2. INTERVIEW GUIDES WERE DEVELOPED FOR HOSPITAL AND PSRO DATA ACQUISITION TO ASSURE THAT A UNIFORM, EFFICIENT APPROACH WAS TAKEN WITH EACH RESPONDENT

Use of interview guides was selected as the best strategy among the data collection alternatives. Mail and telephone survey approaches were rejected. The complexity of the data required on each type of UR activity and the sensitivity of acquiring financial data were expected to make data collection difficult. Thus, figure collected without the establishment of rapport with the respondents would be too weak for use in meeting OPEL PSRO evaluation objectives. Site visits provide the following advantages; they:

- Reduce the burden of effort required by the respondents
- Reduce errors due to differences in how UR terms are defined from hospital to hospital
- Reduce bias arising from respondents' raising or lowering their cost estimates in an attempt to influence federal policy or to make their hospital "look good."

The hospital interview guide in Appendix B (refer to Appendices C, D, and E for PSRO-level discussion) was developed based on project team experience doing similar studies. The guide was then tested at 16 hospitals, including both delegated and non-PSRO hospitals. At the time of the pretest, old UR data were collected in great detail. This was accomplished by completing the full interview guide twice, once for old UR and once for PSRO or new UR. A number of refinements were made to the hospital-level guide after the field test:

- The hospital-level guide was enlarged to include more process data
- An additional cost component UR committee was identified as a separate cost element

- The cost collection strategy for identifying old UR costs was greatly simplified after experience showed that highly detailed information on the 1974 program was not generally available at the hospitals

- Medical care evaluation studies were differentiated according to type, i.e., medical, nursing, or other audits

3. INTERVIEWERS WENT THROUGH RIGOROUS TRAINING BEFORE DATA ACQUISITION AT HOSPITALS BEGAN

Prior to initiation of training, each hospital interviewer was provided with a notebook containing a glossary of terms, summaries of program process activity, and other background materials on the PSRO program and the role of the interviewer in this study. Having reviewed these materials prior to the formal training seminar, the interviewers approached their orientation well acquainted with the nature of their role. They received three days of classroom training before receiving on-site training. The classroom training activities included the following:

- Day 1--Orientation And Introduction--Including historical background of the PSRO program, evolution of the current study, and overview of the interview guide and data collection instructions.

- Day 2--Workshop On Interviewing Technique And Data Collection Procedures--Including roleplaying by interviewers, emphasizing flowcharting and cost allocation technique.

- Day 3--Site Visit Simulation--The entire interview process was rehearsed from start to finish, and areas of difficulty were covered several times.

At the completion of the classroom training, each interviewer demonstrated his competence in every facet of the data collection process, under the watchful eye of trainers experienced in the hospital interview process. Materials completed by the trainee interviewers were carefully inspected by the trainers in order to assure that all interviewers were handling figures in a uniform manner. Over the three-day period, each trainee's progress was closely monitored by the trainers in a highly interactive manner. (The ratio of trainers to trainees at the seminar was 1:2.) After completion of classroom training, each interviewer was given the opportunity to observe experienced interviewers conducting a site visit. Then, each interviewer conducted a hospital visit with on-site supervision by project managers. Completed interview guides were carefully reviewed to confirm interviewer field readiness before interviewers were allowed into the field unaccompanied by trainers.

Before finally conducting solo site visits, interviewers first conducted site visits in teams of two. Further, after the first week of solo field data collection, site visit materials were reviewed and a one-day follow-up seminar was held. From then on, throughout the data collection portion of the study, each interviewer reported to project management daily and, later, every other day by telephone.

4. DETAILED METHODOLOGY FOR COLLECTION OF IN-HOSPITAL DATA

The interview guide provides a very detailed description of data collection procedures. However, further elaboration is appropriate on certain specific points where problems or ambiguities arose. This additional description of data collection procedures is presented to explain how these situations were handled so that interested parties may fully understand study decision rules used in hospitals. Elaboration on those interview guide procedures that need further explanation is presented below in the order in which the procedures appear in the interview guide. (Refer to the interview guide in Appendix B as needed.) Each procedure discussed can be located in the interview guide by the indicated number, e.g., II. 3. (1)a. can be found in Section II, Part 3, number (1), under a. Instructions are presented below:

SECTION I

3. HOSPITAL STAFF OVERVIEW OF THE HOSPITAL

(1) General Hospital Information

a. Fiscal Year

Confusion was encountered in regard to the following:

- Fiscal Years Changed During The Target Year--Some hospitals were in the process of changing their fiscal years to coordinate with the change in the federal fiscal year. Where this occurred, the period most closely approximating Calendar Year 1976 was used.

- PSRO Review Occurred For Only Part Of The Target Fiscal Year--If PSRO review was being done for nine months or more, costs and activities were extrapolated to reflect a full year's program operation. If PSRO review was being done for eight months or less, during fiscal 1976, the 12-month period including time in Fiscal 1977 that most closely approximated 1976 was used.

b. Number Of Beds

Confusion was encountered in regard to the following:

- Change In Number Of Beds--In cases where the adding or closing down of a wing had occurred, the dates and numbers of beds involved had to be carefully noted in order

to make appropriate adjustments when calculating the occupancy rate. For purposes of identifying hospital size, the end-of-year figure was used.

- The Number Of Beds Reported On The 2552 Form Disagreed With What The Administrator Reported--In these cases, the figures given on the 2552 forms were used.

- Unused Beds--Unused certified beds were included in bed size figures.

c. Teaching Status

Hospital teaching status was often unclear. Interns and residents from outside programs were sometimes present in hospitals. This study considered a hospital "non-teaching" unless it operated its own distinct program.

d. Hospital Control

Ambiguities regarding hospital control arose in the following situations:

- For-profit management company managing voluntary hospital

- Voluntary organization such as a church organization managing a government-owned hospital

- Teaching hospital affiliated with city-university medical school

This study considered the hospital's financial status as the determining factor.

e. Level Of Service

Ambiguities arose in the following areas:

- Distinguishing Diagnostic And Therapeutic Units--Many hospitals had diagnostic but not therapeutic radioisotope and cobalt services. Unless the service was clearly therapeutic, it was not counted.

- Identifying Psychiatric Inpatient Units--Many hospitals have a small number of beds set aside for psychiatric patients that may be used for other patients as well. Such situations were not considered psychiatric inpatient units.

f. Hospital Utilization Data

Problems occurred in regard to the following:

- SSA 2552 Or SSA 2570 Forms Were Sometimes Not Available--In cases where the hospital had changed ownership or had a change of administration, interviewers had to search through other available records to obtain these data.

- Medicaid Data Were Often Not Available On 2552 Or 2570 Form--State Medicaid reporting forms would have to be accessed in such cases.

- Maternal And Child Health (MCH) Figures Were Rarely Available--Very few MCH patients were identified.

- Outpatient Visit Figures Were Not Uniformly Compiled By The Hospitals--Confusion was encountered in regard to the following:

  - In many cases, no outpatient visit figures were available
  - Many hospitals kept figures on "encounters" rather than "visits" and could not convert one to the other
  - Some hospitals differentiated emergency room visits from other outpatient visits
  - Outpatient units were associated or disassociated with the main hospital to varying degrees. Thus, ambiguities arose as to whether or not to count affiliated program figures.

  Project staff counted outpatient visits only when they were completed by hospital staff. Affiliated agencies were not included. No resolution of the visits versus encounters problem was achieved. Where possible, visits were counted. However, where only encounters were available, they were accepted. This rather relaxed approach was taken because the numbers were only being identified to see if the proportion of outpatient visits to inpatient days was related to cost. Further, it appears likely that earlier studies relating higher costs to higher ratios may have had this definitional problem without knowing about it.

4. DISCUSS IN-HOSPITAL REVIEW ACTIVITIES

(1) Extent Of Review

Confusion was encountered in regard to the following:

- Change In Population Being Reviewed--The dates and change in numbers of patients reviewed had to be carefully noted in order that the true number of discharges covered in the program be identified and used when computing the unit costs in Exhibit V of the interview guide.

  Corresponding changes in staffing levels had also to be carefully noted in order that the correct FTE figures were used in Exhibit V.

(2) Admissions Review And (3) Continued Stay Review

a. Time Frame

Confusion was encountered in regard to identifying retrospective admissions and continued stay reviews. In most hospitals, AR and CSR were done concurrently. Retrospective reviews, however, were done for problem cases, i.e., for patients not identified as federal patients until after they have been discharged. The intent of this question is to identify the usual time frame; thus, such exceptional cases were ignored.

g. Denials

Exactly what constituted a denial was sometimes unclear. The number of denial letters sent was adopted as a proxy.

(4) Identify The Types Of Medical Care Evaluation Going On

Confusion was encountered in regard to the following:

- What Constitutes An Audit--Terminology varies among hospitals. Concurrent and retrospective chart review processes done for various reasons, i.e., quality assurance, personnel monitoring, etc., are called by various names, including audits. Interviewers used their best judgment in determining which activities should be counted as audits. Generally, concurrent audits were not counted because JCAH does not accept them for fulfillment of requirements. Re-audits were counted as separate audits if new records were pulled.

- Determining How Many Audits Were Completed In The Fiscal Year--Audit completion dates are often vague because completion of the audit process involves reporting the findings up through channels to the hospital board. Final signature by the hospital board may occur months after the work was completed. Interviewers used the point that the findings were reported to the medical audit committee as the end of the audit. This corresponded with the end of the activity for which costs were incurred.

- Combined Audits--Combined medical and nursing audits were categorized as medical audits. An audit was considered to be a combined audit if physicians and nurses sat at the same table to develop criteria and analyze findings worked from the same abstract sheets. Where nurses and doctors develop separate criteria and hold separate meetings, the audits are considered separate, although these audits may have occurred simultaneously and have involved the same patient charts.

- Medical Audit Activity Is Often Uneven Over Time--Often a flurry of medical audit activity occurs immediately before or after a JCAH site visit. Thus, the number of audits conducted during the fiscal year may not reflect the required number of audits or level of audit activity at the hospital. Nevertheless, the actual number of audits completed was used.

SECTION II

EXHIBIT II--COST ELEMENTS ALLOCATED OVER MAJOR REVIEW ACTIVITIES

The following policies were used in allocating percentages of full-time equivalents:

Full-Time UR Personnel--The following procedure was used in making time allocations:

- The amount of time spent on specific tasks involved was drawn from the flowchart, or the flowchart was used to show exactly what activities were under consideration when time estimates were developed.

- Time spent in each of the major activity areas was totaled.

When time allocations for an individual added up to more or less than the time the individual worked during the day (and the individual could not adjust her/his allocations to the appropriate level), the total was reconciled by proportional adjustments. That is, the time is reallocated based on the percentage of time to the task areas such that it totals to the total work day. Where overtime hours were paid, they were included.

Other Personnel Engaged In UR Activities--FTE allocations were developed differently for other personnel, i.e., hospital staff who are not full-time UR personnel but who spend part of their working day performing activities in support of one UR function. Examples include administrators who supervise UR as part of their overall responsibilities, admitting clerks who fill out work control cards on federal patients, and file clerks who pull records for medical records. In these cases, only the actual amount of time spent in the specific activities was counted.

Allocating Time To General Administration--Interviewers endeavored to allocate personnel time into the other areas whenever possible. This cost category was reserved for time involved in UR that could not sensibly be allocated to other areas. This mainly included supervisory time, time spent in preparation of reports, and time spent for training activities.

The following procedures were used in assigning costs:

Average salaries were used where numerous staff of a specific type were used, e.g., medical records clerks, nurses.

Where changes in key personnel such as review coordinators had occurred during the year, the salary costs incurred by each individual were totaled up to obtain the true cost rather than the average cost of personnel time invested in this position.

APPENDIX B

INTERVIEW GUIDE FOR THE HOSPITAL LEVEL COST STUDY

(OMB CLEARANCE NUMBER 68-S-77015)

May 12, 1977

i. INTRODUCTION TO THE INTERVIEW GUIDE

This interview guide is designed to assist Macro field staff to work with hospital personnel to determine the in-hospital cost of utilization review (UR) programs intended to assure the medical necessity, appropriateness, and quality of medical care. This guide is designed for use in identifying costs of in-hospital UR activities in three discrete programs:

- The Professional Standards Review Organization (PSRO) program in the most recent complete fiscal year
- The UR program under current Medicare/Medicaid regulations (called "new" UR) in the most recent complete fiscal year
- The UR program under Medicare/Medicaid regulations prior to November, 1974 (called "old" UR) in the last complete fiscal year when the program operated (generally FY 1974)

Primary emphasis is focused on PSRO and new UR because they represent the two major alternative quality assurance activities in operation today. However, certain data will also be collected on old UR to facilitate longitudinal comparisons of review program cost.

The costs of all activities conducted as part of the hospital's review program will be identified through the use of this guide. These activities include:

- Admissions review
- Continued stay review
- Medical care evaluations, including:
  - Medical audits
  - Nurse audits
  - Other types of service-oriented audits

- Abstracting of patient data for UR or PSRO purposes and profile analysis, if any. This will ordinarily occur after patient discharge.

- UR committee meetings and any meeting preparation activities

- General administration activities related directly to the review program but not to the operation of a specific aspect of it. Systems or criteria development costs are considered part of general administration.

This survey instrument provides complete background information and detailed instructions to the field staff from the initiation of contact with the hospital to the final thank you after all data have been collected and reviewed. Approximately two days on-site at each hospital are required to gather the information necessary to complete the guide.

The guide is divided into six sequential sections.

i. Introduction to the Interview Guide

ii. Pre-site visit tasks: initial contact and confirmation letter

I. Initial meeting with the hospital: study objectives and overview

II. Flowcharting of in-hospital review activity and completion of MCE summary sheet

III. Allocation of costs to activities and determination of indirect costs

IV. Post-site visit tasks: summary sheet, evaluation, and thank-you letter

Within each section there are two subsections: "Background" and "Questions and Instructions." The "Background" subsections describe the interview process, provide perspectives as to how the section fits with the overall interview, and give some insight into areas of sensitivity that may be encountered. The "Questions and Instructions" subsections provide a list of the questions that

must be answered and give detailed instructions when necessary. All information needed for completion of the interview guide is contained in this document. Space is provided for comments at various points throughout the interview guide so that even anecdotal information may be systematically documented.

Sections i, ii, and IV will be completed off-site. Sections I, II, and III will be completed while working with the hospital staff on-site.

ii. PRE-SITE VISIT TASKS: INITIAL CONTACT AND CONFIRMATION LETTER

All hospitals are selected on a random basis to ensure "fairness" in our sample. Preliminary hospital contacts will be made during Macro visits to the Professional Standards Review Organization (PSRO) or to the state health agency in areas where PSROs do not exist. In either case, preliminary contact procedures will be the same. During the PSRO level cost portion of this study (or on special visits to non-PSRO areas) the PSRO or state agency will be encouraged to make the preliminary contact to gain hospital cooperation. This is an important and delicate step, since participation in the study is entirely voluntary and a high percentage of hospital refusals would cast serious doubt on the statistical validity of our data. PSRO or state officials generally have a rapport with the hospitals and are thus extremely helpful in encouraging the hospitals to participate in a national survey of this type.

A special page of this interview guide has been developed to assist PSRO or state officials in making preliminary contacts (see number 1 in Questions and Instructions below). This page may be detached from the interview guide and given to the local official as a prompter since it describes:

- Study objectives and on-site activity
- How the hospital was selected and the importance to the validity of the study of gaining cooperation from all of the hospitals selected
- Data confidentiality
- The amount of hospital staff time estimated to be needed to complete the study

Space is also provided for the documentation of the name and number of the person Macro should contact at the hospital to complete final arrangements.

In the event that a selected hospital does not wish to participate in the study, the PSRO or state staff person should document hospital characteristics and the reason(s). This is necessary so that we may perform an analysis of nonrespondents (if any occur) when the study is complete to determine whether nonresponse may have skewed our data. However, before a hospital is classified as a nonrespondent, every effort should be made to include them in the survey. If the hospital still believes it cannot participate, another hospital must be selected from the reserve list for every nonrespondent hospital.

When Macro is ready to schedule hospital visits, the completed "Preliminary Contact" pages (i.e., number 1 below) for each hospital in the PSRO area (or non-PSRO area) will be our source document for initial hospital contact. The manner in which the initial contact of a selected hospital is made is important in determining the extent of cooperation that will be obtained. During the initial contact and at all other times, project team members must be sensitive to the concerns and interests of the hospital staff. For instance:

- Hospitals receive many time-consuming information requests from representatives of all levels of government and may not want to commit staff time to yet another study.
- Interest in the way a hospital is conducting its review program may be viewed with great concern especially if the administrator knows the hospital's program is not strong.
- Many unresolved policy issues surrounding review program enforcement and reimbursement have strained relations between hospitals and various government agencies at all levels.

To minimize hospital anxieties, the project team will pay particular attention to precision and economy in our communications with all hospital staff. The questions in this section of the interview guide have been designed to limit slippage and errors by detailing all activities required and providing a form for documentation of each step as it is completed.

During the initial telephone contact, the Macro hospital liaison person will:

- Briefly explain the nature of the study using the outline shown below in "Questions" and explain the amount of hospital staff time we will need (the limit is two days because we will be on site only two days)
- Inform the hospital that all information gathered will be kept confidential
- Identify a firm appointment for the site visit
- Ask the hospital contact to recommend a hotel/motel (this can save us considerable time and expense)
- Confirm with the hospital their mailing and street address
- Assess the extent of the hospital's interest, cooperation, or concern regarding the study and document problem areas for pre-site briefing on sensitive areas

A letter confirming the site visit arrangements will be sent to the hospital as soon as possible after the Macro telephone contact (including photostatic copies to the OPEL project leader and the Macro project manager). A prototype confirmation letter appears in Exhibit i-I, following "Questions and Instructions" below.

QUESTIONS AND INSTRUCTIONS

1. PRELIMINARY CONTACT OF HOSPITAL BY THE PSRO OR STATE

(1) Hospital Name:_____

(2) Person Contacted:_____ Phone: (____)_____

(3) Title:_____

(4) Hospital Mailing Address:_____

_____

_____

(5) Hospital Street Address (If different from mailing):_____

_____

_____

(6) Name of PSRO or state staff member who contacted the hospital: _____

Date of contact:_____

(7) Tentative site visit arrangements (If any):_____

(8) Points to be covered during Preliminary Contact by the PSRO:

a. This is_____of the_____PSRO calling to discuss your participation in a Department of Health, Education, and Welfare nationwide study of utilization review costs which is being conducted under contract by Macro Systems, Inc., an independent consulting firm.

b. The purpose of this study is to determine:

- PSRO-level costs and activities in 12 PSRO areas throughout the country, 8 with primarily delegated hospitals and 4 with primarily nondelegated hospitals

- In-hospital PSRO review costs in 8 PSRO areas throughout the country. From 6 to 14 hospitals will be interviewed in each PSRO area, depending on the total number of hospitals in an area.

- In-hospital UR review costs in states with no PSRO review. Nine to fourteen hospitals will be interviewed in these areas.

In total, approximately 110 hospitals, 12 PSROs, and 2 non-PSRO areas will be visited nationwide.

c. Your hospital was selected randomly from among the hospitals in your PSRO area. Because nonresponse in a random sample impacts rather severely on the statistical inferences that may be made from study results, it is very important that each hospital selected agree to participate.

d. It is important that hospital staff familiar with review activities be available to be interviewed during the two days Macro field staff are on site developing the review activity costs.

e. Macro site team members and hospital staff members will complete the following activities during the site visit:

- Flowchart present review activities
- Identify time involved for the completion of each step in the process
- Collect basic statistics on the kind and number of reviews

f. Will you participate in this study?

- (If yes) A Macro staff member will contact you within the next several weeks to set an exact site visit date. Are there any dates when a site visit would be inconvenient?

  _____

- (If no) Please explain why you are unwilling to participate in the study.

  _____

  _____

  _____

(9) Comments by the PSRO or state (To be completed after the preliminary contact):_____

_____

_____

_____

_____

2. MACRO INITIAL HOSPITAL CONTACT

(1) Person(s) Contacted	Title	Telephone	Date
_____	_____	_____	_____
Complete during Conversation _____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(2) Points To Be Covered During Initial Telephone Contact

a. This is_____of Macro Systems, Inc., calling to discuss your participation in a Department of Health, Education, and Welfare study of utilization review costs.

b. _____ spoke with you about this study on _____.
PSRO or state staff contact shown in 1.(6) above. (date of contact)

c. The purpose of this study is to determine:

- PSRO-level costs and activities in 12 PSRO areas throughout the country
- In-hospital PSRO review costs in 8 PSRO areas throughout the country. From 6 to 14 hospitals will be interviewed in each PSRO area, depending on the total number of hospitals in an area.
- In-hospital review costs in two non-PSRO areas. Nine to fourteen hospitals will be interviewed in each of these areas.

(Section I Study Objectives provides more detail on these points.)

d. Your hospital was selected randomly from the hospitals in your PSRO area. It is important for methodological reasons that there be a high participation rate because nonresponse severely limits the statistical confidence with which HEW may make inferences about study results.

e. Macro on-site activities will include working with the Hospital Administrator, the Hospital Accountant, the Utilization Review Coordinator, and other staff who are familiar with most review activities, including medical care evaluations and utilization review committee processes. We anticipate that we will need to spend one to two hours with each of these individuals. To collect the necessary data, it is important that we schedule our site visit when these persons will be present.

f. Macro site team members and hospital staff members will complete the following activities during the site visit:

- Flowchart present review activities
- Identify time required for the completion of each step in the process
- Collect basic statistics on the kind and number of reviews

All cost information from individual hospitals will be reported in such a way that your hospital cannot be identified.

g. We will make every effort to work around your hospital's schedule. We can interview the necessary staff either individually or in groups, whichever you feel would be most appropriate. It is important, however, that initially we are able to speak with someone who can provide us with an overview of the UR process and can identify the staff we need to speak with to obtain the details. The product of Macro's work will be:

- Flowcharts describing the steps involved in utilization review at your hospital
- A summary sheet of costs for all review activities

h. What day would it be most convenient to meet? We were hoping for _____.
(suggest a date)

(3) Confirmed Site Visit Date

a. Date of meeting: _____ Time: _____

b. Hospital officials to attend the initial orientation meeting with Macro:

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

c. Building and room number:_____

d. Address (If different from above):_____

_____

e. Hotel/motel recommended:_____

Telephone (Get from Information):_____

(4) Comments And Important Items Discussed During Phone Conversation:_____

_____

Complete after Conversation _____

_____

_____

(5) Comments Upon Perceived Cooperation Of Hospital:

_____Unqualified cooperation _____Qualified (Describe problems below)

_____

Complete after Conversation _____

_____

_____

3. HOSPITAL SITE VISIT CONFIRMATION LETTER (Prototype follows this page)

a. Date letter sent:_____

b. Copies of site visit confirmation letter sent to (Check when sent):

☐ Macro Project Manager

HOSPITAL SITE VISIT CONFIRMATION LETTER

-Date-

Mr. John Crawley
Administrator
Samaritan Hospital
1000 State Street
Good Hope, Rhode Island 02146

Dear Mr. Crawley:

We appreciate your willingness to participate in the nationwide study Macro Systems is conducting for the Department of Health, Education, and Welfare (HEW). This letter is to confirm our meeting at _____ on _____. During our initial meeting, we will review the
(Time) (Day of the week and date)
objective of our study and the activities we will be engaged in while at your hospital. During this meeting, we hope that you, or one of your assistants, can provide us with an overview of the utilization review process in your hospital and identify the individuals we should interview to identify the details of the operation.

The objective of the HEW study is to determine the cost of the national PSRO review (utilization review) program. The study is not intended to determine reimbursement rates for hospital review under the PSRO program. To assess the review costs at your hospital, we will work with your staff to flowchart the step-by-step process used for each type of review in your hospital. By this means, we will identify all personnel and nonpersonnel cost elements in each process. Then we will develop estimates of the time involved in each activity for all personnel and identify personnel and other resource costs from accounting records. All written products Macro develops at your hospital will be reviewed with you prior to completion of the site visit. The products we develop will be confidential and will appear only in either aggregate or coded form in any work submitted to HEW.

We appreciate your willingness to participate in this study. If you have any questions, please contact me at (301) 585-6939. We look forward to meeting with you on _____.
(Day of the week, date)

Sincerely,

Name
(MSI Title)

MACRO SYSTEMS, INC.

cc: Macro Project Manager

May 12, 1977

I. INITIAL MEETING WITH THE HOSPITAL: STUDY OBJECTIVES AND OVERVIEW

The initial meeting with the hospital should include the hospital contact person, usually the hospital administrator, and, at the discretion of the administrator, other hospital staff knowledgeable about the hospital review program. The objective of this meeting will be to:

- Present the study objectives and go over the interview guide briefly so that all present will know what to expect and have the opportunity to ask questions
- Listen to a brief account by hospital staff of the history of their review program and obtain an overview of its current operational structure
- Work with the hospital staff to develop an interview schedule for the remainder of the on-site effort, including an exit interview with the contact person

Clarification of the study objectives will allow the hospital to respond more accurately to information requests from the Macro field interviewer. In addition, this initial step will help establish rapport with hospital staff and reduce any anxieties the staff may have concerning who we are and what we are doing.

Once the hospital staff understands the nature of our informational needs and we have a basic overview of hospital review activities, we can work with the staff to schedule the rest of the on-site work. Generally, group meetings among staff who have identical duties are preferable to individual interviews because hospital staff can provide immediate validation of each others' answers and rapidly reach a consensus on what the key hospital review activities are. However, if the hospital staff would like separate interviews, the Macro team

will develop a tentative appointment schedule for individual interviews. When the initial meeting is complete, a short break may be suggested before plunging into Section II.

QUESTIONS AND INSTRUCTIONS

1. OPEN THE MEETING BY INTRODUCING THE STUDY TEAM AND MAKING INTRODUCTIONS AROUND THE ROOM. Send an attendance sheet around to identify the attendees as follows:

Name	Title

2. DISCUSS STUDY OBJECTIVES AND ANSWER ANY QUESTIONS

The objective of this study is to develop an accurate estimate of the cost of the PSRO review program in nationwide (or UR program, as the case may be). To accomplish this we must identify review activity costs in your hospital. In effect, Macro will establish a "review cost center." This requires identifying all cost elements, both personnel and nonpersonnel, directly related to the review program and grouping them in the new cost center. The review program costs may consist of some, perhaps all, of the following components:

- Admissions review
- Continued stay review
- Medical care evaluation studies, including:
  - Medical audits
  - Nurse audits
  - Other audits related to patient care
- Development of abstracts on patients and profiling and analysis of profiles of care
- Utilization review committee meetings and preparation for the meetings
- General administrative activity related to the review program that cannot be allocated to any of the above activities. Systems development costs for the above areas are also included in the category.

Identification of costs with this degree of specificity helps Macro make sure we have found all of the appropriate costs. More importantly, this specificity makes it possible for the Department of Health, Education, and Welfare (HEW) to develop estimates of the costs based on different mixes of emphasis on each of these activity components.

Macro activities to identify all of the costs involve:

- Identify basic hospital and review program descriptive data
- Develop flowcharts of each activity component identified above
  - Each hospital is not necessarily expected to have activities in each area. Flowchart the existing activities.
  - Where the activity component comprises a series of discrete, unrelated activities (i.e., not a sequence of activities) "dot points" will be used to document hospital actions. Flowcharting does not work in such cases.
- Based on the flowcharts and hospital review personnel's best estimates, allocate personnel time to each of the activity components. Also allocate nonpersonnel costs.
- Identify hospital "indirect costs" based on the annual cost reimbursement and statistical report form (SSA-2552 or SSA-2570).
- Check completed figures with the hospital administrator (or designated representative) and complete an exit debriefing before departure.

The costs we identify will be used with similar data from other area hospitals to estimate the cost of in-hospital review for the area. Then, data from all areas visited will be aggregated to estimate the nationwide costs. The descriptive data will be used to try to identify cost correlates or variables that might help HEW predict costs in different types of hospitals.

3. HOSPITAL STAFF OVERVIEW OF THE HOSPITAL

(1) General Hospital Information

The following variables may be related to review costs. It is important to collect this information so that, during the data manipulation process, hypotheses can be tested about the relationship between review costs and these variables.

a. Fiscal year - begins:_____ ends:_____

b. Number of beds:

Acute (including special care units): _____
Long-Term Care:_____

c. Teaching status (check as many as apply)

- ☐ Nonteaching
- ☐ Internship Program
- ☐ Residency Program
- ☐ Member, Council of Teaching Hospitals

d. Hospital control (check one box only)

- ☐ Proprietary
- ☐ Government-Non-federal
- ☐ Voluntary

e. Level of service (check as many as apply)

- ☐ Radioisotope therapy
- ☐ Cobalt therapy
- ☐ Psychiatric inpatient unit

f. Hospital Utilization Data (Complete for Both FY 1974 and FY 1976)

Hospital utilization should be gathered for FY 1974 and FY 1976. This data should be taken directly from page 2 of the Cost Reimbursement and Statistical Report (form SSA-2552 or form SSA-2570). Be sure to exclude all newborns from the figures and to include all deaths in discharge figures; also remember to include figures from all special care units (i.e., develop line totals from the SSA-2552 or SSA-2570).

1974 Cost Reimbursement and Statistical Report

Data Element	Federal				Nonfederal	Total
	Total	Medicare (XVIII)	Medicaid (XIX)	MCH (V)		
Admissions						
Discharges						
Inpatient Days						
Average LOS						
Bed Days Available						
Number Outpatient Visits						

1976 Cost Reimbursement and Statistical Report

Data Element	Federal				Nonfederal	Total
	Total	Medicare (XVIII)	Medicaid (XIX)	MCH (V)		
Admissions						
Discharges						
Inpatient Days						
Average LOS						
Bed Days Available						
Number Outpatient Visits						

g. 1974

- Based on the 1974 data in f. above, compute as follows:

  - Occupancy rate = $\frac{\text{Total Inpatient Days}}{\text{Bed Days Available}}$ = _____

  - Average Census = Occupancy rate X Number of Beds = _____ (from Question 3.1-b)

  - Ratio of outpatient to inpatient days = $\frac{\text{Outpatient Visits}}{\text{Inpatient Days}}$ = _____

1976

- Based on the 1976 data in f. above, compute as follows:

  - Occupancy rate = $\frac{\text{Total Inpatient Days}}{\text{Bed Days Available}}$ = _____

  - Average Census = Occupancy rate X Number of Beds = _____ (from Question 3.1-b)

  - Ratio of outpatient to inpatient days = $\frac{\text{Outpatient Visits}}{\text{Inpatient Days}}$ = _____

h. Ratio of outpatient days to inpatient days is: (check each applicable box)

. For 1974	. For 1976
☐ Above the average in the area sample	☐ Above the average in the area sample
☐ Above the average in the national sample	☐ Above the average in the national sample

(These boxes cannot be completed until data from all hospitals in the study have been collected.)

4. DISCUSS IN-HOSPITAL REVIEW ACTIVITIES

(1) Extent of Review

The extent of review is important because it identifies the basis for developing unit costs (e.g., "all patients reviewed" indicates a larger number of units of review activity than if only Federal patients are reviewed). In addition, in some areas patients receive different types of review depending upon their payment status. We must document these differences. Check all boxes that apply:

a. ☐ All patients reviewed under same review program
b. ☐ Only Federal patients are reviewed (Medicare, Medicaid, Maternal and Child Health)
c. ☐ Medicare review differs from Medicaid review (explain below and complete a separate sheet for questions 2 through 5 below).
d. ☐ Non-federal patient review differs from Federal patient review (explain below)
e. ☐ Non-federal patient review is the same as Federal patient review except:

☐ The time periods differ
☐ No abstracting is done on non federal patients (explain below)

Explanations (as required)

_____

_____

_____

_____

_____

_____

(2) Admissions Review (AR)

Admissions review consists of a determination of medical necessity and appropriateness of a patient's admission to the hospital. If the hospital does admissions review, this section should be completed; otherwise, go to 3, below, for continued stay review.

a. Time Frame--AR can be done prior to patient admission (Preadmission), within 24 hours after the patient is admitted (Concurrent), or on a retrospective basis (Retrospective). (Check the appropriate box.)

☐ Preadmission
☐ Concurrent
☐ Retrospective

b. Criteria: Different criteria can be used in AR to determine medical necessity and appropriateness of care. Check the box that most closely describes the criteria employed for AR.

- ☐ Category specific. Admission criteria for broad medical classifications (surgical, obstetrics, etc.) are used.
- ☐ Diagnosis specific. Admission criteria are based on diagnosis or problem, without considering other variables.
- ☐ Diagnosis, age, and sex specific. Admission criteria are based on diagnostic or problem symptoms that differ based on the age and/or sex of the patient.
- ☐ Judgmental. No formal specific admission criteria exist.
- ☐ No criteria are used.
- ☐ Other - Explain

_____

_____

_____

_____

c. Origin of Criteria: It is important to record how the AR criteria were developed. Check the appropriate box:

- ☐ Source outside the hospital, such as PAS, medical society, PSRO. If any outside source, document the:

  Name of document:_____
  Date published:_____
  Group responsible:_____

- ☐ Physician knowledge
- ☐ Based on hospital collected data
- ☐ Other - Explain:

_____

_____

_____

d. Length of Stay (LOS) Assignment: During AR, most hospitals will assign a LOS in days. Toward the end of the LOS, the patient will be reviewed again to determine if continued hospitalization is medically necessary. The LOS assignment is made upon one of the following criteria: (check boxes and complete appropriate spaces)

- ☐ Fixed period. All patients are reviewed after a fixed time period. The time period is _____days.
- ☐ Category specific
- ☐ Diagnosis specific
- ☐ Diagnosis, age, and sex specific
- ☐ Judgmental (explain below)
- ☐ No LOS assignment made
- ☐ Other (explain below)

Explanations (if required)

_____

_____

_____

e. Origin of LOS data:

☐ Sources outside the hospital, such as PAS, medical society, PSRO, etc. If an outside source, document the:

Name of document:_____
Date published:_____
Group responsible:_____

☐ Physician knowledge and experience
☐ Hospital historical data
☐ Other (Explain)
☐ Combination of the above (check other appropriate boxes and explain)

Explanation (if required)

_____

_____

_____

f. Basis of LOS assignments

Initial LOS based on _____percentile

Subsequent LOS extension based on (explain)_____

_____

g. Identify the Number of Admissions Reviews Completed During the Fiscal Year

Complete the chart below with the best available data or the best possible estimates. Then document the method used to develop these figures.

- Generally, the number of admissions reviewed correspond to the number of Federal patient admissions. However, make sure that the respondent answering this question is sure about this figure before accepting it.

- Referrals to the review physician (RP), sometimes called the physician advisor, may be more difficult to estimate. Interviewers may have to actually count the number of times RP signatures appear on review documents over the past 6 months to a year to determine this number. If no documentation is available, respondent memory must be relied upon.

. The number of denials may generally be determined in the same manner and at the same time as the referrals to the review physician.

Number of Admission Reviews

Data Element	Federal				Nonfederal	Total
	Total	Medicare (XVIII)	Medicaid (XIX)	MCH (V)		
Number of Patients Reviewed						
Number Referrals to RP						
Number of Denials						

h. The number of patients reviewed was obtained from: (check appropriate box)

☐ Actual records
☐ Estimates or projections based on some records
☐ Other--Explain: _____

i. The number of referrals to the review physician (RP) was determined from: (check appropriate box)

☐ Actual records
☐ Estimates or projections based on some records
☐ Other--Explain: _____

j. Since review program implementation, the number of referrals to the RP have (compare successive months or quarters to one another, check the appropriate boxes, and document the figures):

☐ Increased dramatically (greater than 75% increase) _____
☐ Increased somewhat (from 25% to 75% increase) _____
☐ Remained constant (from 25% increase to 25% decrease) _____
☐ Decreased somewhat (from 25% to 75% decrease) _____
☐ Decreased dramatically (greater than 75% decrease) _____
Number during initial period: _____ Comparison period: _____
Identify the periods: _____ to _____

k. The number of denials (above) was determined from:

- ☐ Actual records
- ☐ Estimates or projections based on some records
- ☐ Other--Explain: _____

_____

_____

l. Since review program implementation the number of denials to the RP have (compare successive months or quarters to one another, check the appropriate boxes, and document the figures):

- ☐ Increased dramatically (greater than 75% increase) _____
- ☐ Increased somewhat (from 25% to 75% increase) _____
- ☐ Remained constant (from 25% to 25% decrease) _____
- ☐ Decreased somewhat (from 25% to 75% decrease) _____
- ☐ Decreased dramatically (greater than 75% decrease) _____
- ☐ Number during initial period: _____ Comparison period: _____

  Identify the periods: _____ to _____

(3) Continued Stay Review (CSR)

Continued stay review consists of review of patients or patient charts to assess the medical necessity and appropriateness of continued stay in the hospital. Note the distinction between CSR and the Physician Certification/Recertification process. The Certification process involves making sure that the attending physician signs a statement indicating that continued hospital-level care is required. CSR must be conducted by staff not professionally involved in the case. The Certification/Recertification process should not be included in the review costs of the survey. However, where the occurrence of a certification or recertification flags a patient chart for eventual utilization review, the review activity should be costed.

a. Time Frame: CSR must be done on one of two bases (please check appropriate box):

- ☐ Concurrent review
- ☐ Retrospective review

b. Criteria: Different criteria can be used in CSR to determine continued medical necessity and appropriateness of care. Check the box that most closely describes the criteria employed for CSR.

- ☐ Category specific: Criteria are based on broad medical classifications (surgical, obstetrics, etc.)
- ☐ Diagnosis specific: Criteria are based on persistence of continued single diagnosis
- ☐ Diagnosis, age, and/or sex specific. Criteria are based on persistence of multiple diagnostic symptoms and are age and/or sex specific.

- ☐ Judgmental
- ☐ No formal specific CSR exists
- ☐ No CSR complete
- ☐ Other - Explain

_____

_____

_____

c. Origin of Criteria: It is important to note how the CSR criteria were developed. Check the appropriate box.

☐ Outside source, such as PAS, medical society, or PSRO. If an outside source, document the:

Name of document:_____
Date published:_____
Group responsible:_____

- ☐ Physician knowledge and experience
- ☐ Hospital historical data
- ☐ Other - Explain
- ☐ Combination of the above (check other appropriate boxes and explain)

Explanations (if required)

_____

_____

_____

_____

_____

d. Identify the Number of Continued Stay Reviews Completed During the Fiscal Year

Complete the chart below with the best available data or the best possible estimates. Then document the method used to develop the figures.

- Documentation on the number of patients reviewed and the number of continued stay reviews almost never exists, but ask for it. Where no exact figures can be identified, work with all knowledgeable individuals to identify their best estimates.

- The number of referrals to the review physician (RP), sometimes called the physician advisor, is also difficult to identify. However, interviewers may be able to actually count the number of times RP signatures appear on review documents over the past 6 to 12 months to determine this number. If no documentation is available, respondent memory must be relied upon, as above. All reviews done by physician as a result of review coordinator challenges should be included in this category.

- The number of denials may generally be determined in the same manner and at the same time as the referrals to the RP.

Number of Continued Stay Reviews

Data Element	Federal				Nonfederal	Total
	Total	Medicare (XVIII)	Medicaid (XIX)	MCH (V)		
Number of Patients Reviewed						
Number of Reviews						
Number Referrals to RP						
Number of Denials						

e. The number of patients reviewed was determined from: (check appropriate box)

- ☐ Actual records
- ☐ Estimates based on actual records
- ☐ Other--Explain: _____

f. The number of continued stay reviews performed was obtained from: (check appropriate box)

- ☐ Actual records
- ☐ Estimates based on actual records
- ☐ Other--Explain: _____

g. The number of referrals to the review physician (RP) was determined from: (check appropriate box)

- ☐ Actual records
- ☐ Estimates or projections based on some records
- ☐ Other--Explain: _____

h. Since review program implementation, the number of referrals to the RP have (compare successive months or quarters to one another, check the appropriate boxes, and document the figures):

- ☐ Increased dramatically (greater than 75% increase) _____
- ☐ Increased somewhat (from 25% to 75% increase) _____
- ☐ Remained constant (from 25% increase to 25% decrease) _____
- ☐ Decreased somewhat (from 25% to 75% decrease) _____
- ☐ Decreased dramatically (greater than 75% decrease) _____

Number during initial period: _____ Comparison period: _____

Identify the periods: _____ to _____

i. The number of denials (above) was determined from:

- ☐ Actual records
- ☐ Estimated or projections based on some records
- ☐ Other--Explain: _____

_____

_____

j. Since review program implementation, the number of referrals to the RP have (compare successive months or quarters to one another, check the appropriate boxes, and document the figures):

- ☐ Increased dramatically (greater than 75% increase) _____
- ☐ Increased somewhat (from 25% to 75% increase) _____
- ☐ Remained constant (from 25% increase to 25% decrease) _____
- ☐ Decreased somewhat (from 25% to 75% decrease) _____
- ☐ Decreased dramatically (greater than 75% decrease) _____

Number during initial period: _____ Comparison period: _____

Identify the periods: _____ to _____

(4) Identify the Types of Medical Care Evaluation Going On

	Number Completed In Fiscal Year 1976
a. Medical audits	_____
b. Nurse audits	_____
c. Other patient care audits	_____

(5) Identify the Extent of Utilization Review Committee Effort

- ☐ The UR committee reviews patient charts during their meetings
- ☐ The UR committee sets policy and establishes procedures for the review program
- ☐ The UR committee does not actually meet as a whole, but rather it is essentially a roster of physicians among which the responsibility for serving as review physician rotates
- ☐ There is no UR committee
- ☐ Other--Explain: _____

_____

_____

(6) Discuss In-Hospital Abstracting and Profile Analysis (PA)

a. Does hospital prepare patient abstracts?

- ☐ Yes (If yes, continue with b. below)
- ☐ No (If no, proceed to question (7))

b. How are patient abstracts prepared? (please check appropriate box)

- ☐ For all federal patients
- ☐ For all nonfederal patients
- ☐ Other - Explain _____

c. Was any profile analysis conducted? (check appropriate boxes)

- ☐ By the hospital
- ☐ By the PSRO
- ☐ Other - Explain _____

d. What hospital actions were taken based on PA? (check appropriate boxes)

- ☐ Abstract activity identified and modified
- ☐ MCE initiated
- ☐ Other - Explain _____

_____

e. How were profiles broken down? (check appropriate boxes)

- ☐ Physician
- ☐ Diagnosis
- ☐ Procedure
- ☐ Patient
- ☐ Hospital

f. Who reviewed profiles?

- ☐ Hospital medical staff
- ☐ PSRO staff
- ☐ Other - Explain _____

_____

_____

(7) During concurrent review do some diagnoses characteristically require more review time? Documenting special time requirements such as more RC time due to a large number of procedures, or extra physician time due to frequent RC challenges resulting in referrals to the RP.

- ☐ No
- ☐ Yes - Explain briefly _____

_____

_____

5. DEVELOP TENTATIVE SCHEDULE FOR REMAINDER OF SITE VISIT

Schedule for all appointments

Name(s)	Title	Topic	Time and Place

II. FLOWCHARTING OF IN-HOSPITAL REVIEW ACTIVITIES AND COMPLETION OF THE MEDICAL CARE EVALUATION (MCE) SUMMARY BACKGROUND

BACKGROUND

The purpose of this section is to detail the major steps of review by hospital staff to make sure we identify all elements of review program cost. In order to do this, Macro field staff will work with various hospital staff members to develop flowcharts of the patient review process. The purpose of developing flowcharts is threefold:

- Flowcharting provides a standard methodology to assist field staff in structuring interviews with hospital review personnel so that all cost elements will be identified and data will be comparable between hospitals.

- Flowcharting makes it possible for time estimates of the major activities to be developed based on a full understanding between interviewer and respondent of the exact scope of the activities.

- Flowcharting allows detail on the review process to be developed so that different approaches may be identified, and, if possible, models of typical approaches may be developed.

The ultimate objective of this section is to identify precisely the staff time and other direct resources involved in utilization review. In the next section, cost will be associated with staff activities and other direct resources. However, it is important that the flowcharts be developed as separate documents without regard to the allocation of costs discussed in the next section.

The site team's approach may vary in developing the flowcharts. Where several individuals have identical duties, it is generally preferable to work in

groups because group process allows an interplay between two or more persons' memories, resulting in rapid completion of the flowcharts due to the possibility for immediate feedback and discussion.

Whether the information is developed in small groups or in individual interviews, the same basic approach will be taken. Each hospital staff member will be briefed upon initial contact about:

- The purpose of the study
- How the flowcharts fit into the overall cost allocation strategy

A general discussion of in-hospital review activities should follow. Hospital staff should be asked to describe review procedures from time of admission through all the possibilities of discharge. Similarly, if MCE's are being flowcharted, hospital staff should describe the process of MCE from time of inception until completion and reporting of the results plus any follow-up or inquiry into the impact of the MCE. During the description of the review process, the field staff should note the following (see question section for explicit instructions on completion of flowcharts):

- Each time an additional hospital staff becomes involved in any review activity, the titles and names of these people should be recorded (names are included only in our working copy of the guide).
- Any documents or forms used should be noted and copies acquired, if possible. Paperwork flows may help in identifying the complete review process, but the focus of attention should remain on the sequence of review activities.
- Time estimates should be developed for all persons and non-personnel resources for the major steps in the review activity flowcharts.

For certain activities, particularly in the General Administration category and sometimes for the UR committee, flowcharting is ineffective because

activities are discrete rather than sequential. In these cases, "dot point" descriptions of activities will be developed so that, when staff time is allocated to such a category, we will know what it was used for. Program development activities for designing parts of the review system and general administrative activities that cannot be allocated to any specific review activity are examples of activity areas that should be described.

Once the flowchart (or descriptions, as needed) has been developed, the interviewer should total the time estimates for each person involved in the task. Generally, the times developed based on adding the time units for each step in the flowchart are highly distorted. They should not be accepted as accurate. Use them as a starting point for discussion with the individuals concerned about how much time they spend on the review activities. The interviewer is responsible for working with the respondents to develop the most reasonable time estimates possible, bearing in mind the initial total and the scope of activities defined by the flowchart. This requires discussion of the activity in relation to the individual's other review and nonreview duties, if any, as well as consideration of problems that may arise during typical activities. When the most reasonable time estimate is found, document it in Exhibit II, following page II-7.

When working with the individual(s) primarily responsible for MCE's, the Summary of Medical Care Evaluations, Exhibit I, following page II-6, should be completed. This sheet provides an exact summary of all MCE activity completed and follow-up.

QUESTIONS AND INSTRUCTIONS

It is important that you become familiar with our flowcharting specifications before you go out to the hospitals. We believe that the task of flowcharting will become far easier when you have developed a clear impression of what we expect. This section will present:

- Overall guidelines and specifications
- Step-by-step procedures
- Checkpoints

Additionally, a list of standardized abbreviations and a glossary of utilization review terminology is presented in the interviewer instructive materials provided in training.

1. OVERALL GUIDELINES AND SPECIFICATIONS (Review before the interview where flowcharting will occur)

(1) It is the patient review decision-making process you are flowcharting (as opposed to how the review coordinator spends his day, what happens to the patient chart, the patient, etc.).

(2) Include all yes/no branches in the decision-making process except the decision to discharge, which is assumed to be present at any step (do not clutter up your flowcharts unnecessarily inserting the decision to discharge where it is understood).

(3) With regard to the level of specificity desired, the following elements should be documented:

- Every specific task that represents an incremental cost of utilization review
- Every time a new form is introduced
- Every time new personnel enter the process

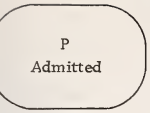
(4) The text within the squares on the flowcharts should be as brief as possible. Use the standardized abbreviations and eliminate any unnecessary verbage.

(5) Be sure to see if activities have occurred in each of the following areas:

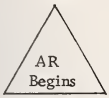
- Admissions review
- Continued stay review
- Medical care evaluation studies including:
  - Medical audits
  - Nurse audits
  - Other audits related to patient care
- Development of abstracts on patients and profiling and analysis of profiles of care
- Utilization review committee meetings and preparation for the meeting
- General administrative activity

Where flowcharting does not work, develop "dot points" describing hospital activity, if any. Whether flowcharting or dot points are used, your approach with the review personnel will be about the same.

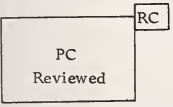
(6) Use the following symbols when developing flowcharts:



- Mark end points on your flowcharts with ovals. All branches should be either hooked back into the system or extended to a logical end point indicated with an oval.

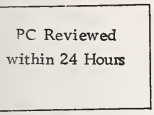


- Where subsystems are present in the process, such as admissions review (AR), continued stay review (CSR), etc., mark them with triangles extending out on the side

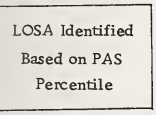


- As an aid in identifying the incremental costs of review, indicate the identity of the personnel involved in incremental tasks with the appropriate abbreviations enclosed in small squares on the upper right-hand side of the square representing the task.

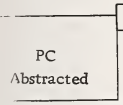
  Occasionally, tasks will occur within the process that do not represent incremental costs of review, such as "admissions data on all patients input to computer." While this task may belong on the flowchart, it should not be indicated as an incremental cost, i.e., not marked with abbreviations enclosed in a small square.



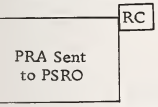
- Specify the time frames involved



- Identify any specific criteria used (and get the name and origin of any screening criteria manuals, etc.)



- Use the passive voice, past tense. Make the language as terse as possible. Eliminate any needless "state-of-being" verbs, i.e., "is," "are," etc.



- Identify all forms used

2. FLOWCHART DEVELOPMENT PROCESS

Working with an individual (or group) familiar with one of the major activity areas, develop your flowchart as follows:

Step 1--Acquire a general understanding of how the process works. Work from general to more specific questions. Ask general questions until you have acquired an overview of the utilization review process, e.g.:

"How many people are involved?"

"Where does the process start and end?"

Step 2--Begin a rough draft of the flowchart to identify the details needed and the people you need to speak with. As your flowchart begins taking shape, the important details that you need to investigate will become apparent to you. Ask more specific questions, e.g.:

Starting from the beginning:

- What specific steps are involved in the process?
- Who performs each of these steps? (Get names and titles.)
- What does each of these tasks involve?
- How long does it take?
- What forms are used? (It is very helpful to have copies of forms used; if they are available, obtain copies.)

Step 3--Review your draft flowchart against the checkpoints below. Follow up to find any data omitted.

Checkpoints

- Walk through the steps in the flowchart. Are there any logical omissions?
- Are the personnel involved identified for all of the tasks that represent incremental costs?
- Look at the end point on the flowcharts. Are all branches either hooked back into the system or followed through to their end points and marked with ovals?
- Does your flowchart begin and end at logical points?
- Are all forms used identified?
- Can you follow the progress of each form used from the beginning to the end of its involvement in the system?
- Are any specific criteria or standards used noted? (e.g., LOSA identified based on PAS)
- Are the time frames involved specified? (e.g., "PC reviewed within 24 hours")
- Have you used the standardized terminology and abbreviations? Are any additional abbreviations or terms used explained? If you find it necessary to incorporate any new terminology or abbreviations, please notify the project management.

Step 4--When speaking to MCE personnel during the flowcharting process, complete Exhibit I.

Because MCE often differs radically from other review activities in terms of scope, we are particularly interested in identifying each MCE completed, including basic information on problems identified and follow-up actions taken. Work with the MCE coordinator(s) to complete Exhibit I, following this page, to document the necessary data.

Step 5--Develop estimates of the time involved for the performance of each major activity and record them on Exhibit II, following this page.

(1) On Exhibit II list the titles of personnel and other cost elements in the approximate order of their appearance on the flowchart. This is to facilitate checking to see if you have included all cost elements.

Identify employee names and titles on a separate sheet. Thus, once salaries have been identified by hospital accounting staff and associated with the titles on Exhibit II, all record of employee names can be destroyed.

(2) Work with the same individuals who completed the flowchart to develop the most accurate assessment of their time utilization and document them on Exhibit II. Do not rush through this portion of your data collection. The quality of your data will be dependent upon how precisely you are able to zero in on the actual amount of time required for the performance of each of the tasks represented on the flowchart.

As a check on the accuracy of the estimates given and as a means of facilitating an interactive discussion, we would like you to approach the time estimates from various directions, e.g.:

- What percentage of the staff time is involved in utilization review?
- What tasks does this staff member perform?
- How much time does this task take per patient?
- What percentage of the staff's time is spent doing this task?
- How long does it take the staff to perform this task on the average day?
- How many times per day, on the average, is this task performed?

These are difficult questions that require patience and sympathetic probing. Operational people often have only a very vague idea of how long each task takes when broken out of their usual routine or how many times per day on the average a task is performed. Work with the staff involved to obtain their best estimate. Whenever possible, verify the time estimates with another source.

Allocate activities to general administration when they cannot be placed in any other category or when they represent one-time or extraordinary expenses, such as program development activity. All dot points developed for general administration or other categories in lieu of flowcharts should be completed on the blank sheet in Exhibit II.

(3) List the names of people providing the estimates.

Name	Title

EXHIBIT I

Office of Planning, Evaluation, and Legislation

Hospital No._____

SUMMARY SHEET OF MEDICAL CARE EVALUATIONS

Name of MCE	Audit Type	Date Completed	Completion	Number of of Cases Included	Problem Identified	Follow-Up
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Key:

Audit Type:
M - Medical
N - Nurse
O - Other

Completion:
1 - Report to staff
2 - Report to hospital board
3 - Other--Explain on separate sheet

Problem Identified (Place as many numbers in box as appropriate):
1 - Physician-related
2 - Nurse-related
3 - Other hospital staff
4 - Diagnosis
5 - Procedures
6 - Deficient documentation
7 - Other--Explain on separate sheet

Follow-Up:
1 - Continuing education
2 - Disciplinary procedures have been developed
3 - Disciplinary procedures are planned
4 - Disciplinary procedures have been taken
5 - Inpact of follow-up action reviewed
6 - No follow-up
7 - Other--Explain on separate sheet

Office of Planning, Evaluation, and Legislation

Note: In each area, be sure to identify any:
- Physician time, paid or donated, for reviews and on committees
- Computer time
- Secretarial/typing support
- Abstractor time
- MCE's for medical as well as nursing

COST ELEMENTS ALLOCATED OVER MAJOR REVIEW ACTIVITIES				Hospital Code:								
						Major Activity (by FTE)						
							Medical Care Evaluation					
Personnel or Other Cost Element (Include Title and Name on Work Sheets, Title Only on Final)	Annualized Salary (Include ___% Fringe) or Cost	Basis for Allocation*	Total (FTE's for Personnel and Percentages for Other)	Admissions Review	Continued Stay Review	Medical Audit	Nurse Audit	Other Audit	Abstracting and Profile Analysis	UR Committee	General Administration

* Key: 1 = Personal estimate; 2 = Supervisor's estimate; 3 = Consensus of personnel with the same responsibilities; 4 = Time sheets or records

Dot Points on Areas Not Flowcharted

III. ALLOCATION OF COSTS TO ACTIVITIES AND DETERMINATION OF INDIRECT COSTS

Once time and resource estimates have been developed in section II, costs can be allocated to the following activites:

- Admission review
- Continued stay review
- Medical care evaluation
  - Medical audits
  - Nurse audits
  - Other audits
- Abstracting and profile analysis
- Utilization review committee
- General administration

This section will detail how the costs associated with the above activites will be determined. Once the Macro field interviewer and the hospital staff are satisfied they have developed an accurate time and resource estimate (Section II), then the field interviewer should meet with the hospital accounting office. During the interview with the hospital accountant, information should be gathered about:

- The annual cost, including fringe, of all personnel and other direct resources involved in review activities and medical care evaluations. (See column one of Exhibit III, following page III-3, for a complete listing.)
- The hospital indirect cost rate. This will be done by obtaining the Medicare Reimbursement Report (Form

SSA 2552) for the most current complete fiscal year and using figures from the report.

- An estimation of the extent of effort and cost of utilization review for Fiscal Year 1974

The Macro field staff interviewer should ask for a place to work once cost figures have been obtained from the accounting office. Exhibit III should be completed at this time. By completing the final two exhibits at the hospital, the field staff interviewer will be able to review all the on-site work completed with the hospital contact person during a final meeting.

When all the exhibits have been completed and have been reviewed for accuracy, the field staff interviewer will give a final briefing to the hospital administrator (or designated contact person). During this meeting:

- Missing information and points requiring clarification should be dealt with.
- The general nature of our cost findings should be reviewed.
- The hospital staff should be thanked for their cooperation.

QUESTIONS AND INSTRUCTIONS

1. COMPLETE EXHIBIT III, COSTS ALLOCATED TO MAJOR ACTIVITIES (following this page)

(1) Meeting With Hospital Accounting Staff

List the names of the accounting staff attending the meeting

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

(2) Instructions for Completing Exhibit III

Step 1--All personnel or other resources included in column 1 of Exhibit II should have their titles copied onto Exhibit III (see exception in Step 2).

Step 2--The annual salaries, including fringe and resource costs, should be written in column 2. Physicians' donated time should be recorded in Exhibit III in hours and totaled at the bottom on the appropriate line.

Step 3--The actual dollar allocation for each personnel type or direct cost element can be be determined as follows:

(Place in Major Activity cost columns on Exhibit III)		(From column 2 Exhibit III)		(From Major Activity column in Exhibit)
Dollar allocation of personnel type to Major Activity	=	[Annual salary (including fringe)]	x	[From Major Activity column in Exhibit]
Dollar allocation of Direct cost element	=	Annual cost	x	[Major Activity Percentage for other]

Step 4--The Major Activity columns should be summed vertically to give Activity totals for both cost and physician donated time.

EXHIBIT III

Hospital Number: _____

Fiscal Year: _____

Office of Planning, Evaluation, and Legislation

COSTS ALLOCATED TO MAJOR ACTIVITIES

Personnel or Other Direct Cost Element (Title Only)	Annual Salary (Includes ___% Fringe) or Cost	Type of Cost	Major Activity Cost							
			Admissions Review	Continued Stay Review	Medical Care Evaluation			Abstracting and Profile Analysis	UR Committee	General Administration
					Medical Audit	Nurse Audit	Other Audit			
Total Activity Cost										
Total Donated Time										

* Key: 1 = Fee for service; 2 = Hospital employee or cost assigned to UR; 3 = Donated time (show in hours)

May 12, 1977

(Space Provided for Additional Notes: Document any anecdotes of bearing on the UR program. Where nonfederal patients receive review different from federal patients, this should be summarized here. Use Exhibit IV, following page III-6, to summarize costs. Be brief.)

(3) Instructions for Determining the Hospital Indirect Rate

Step 1--Obtain the Medicare Reimbursement Report (Form SSA-2552) for the most recent fiscal year during the meeting with the hospital accounting staff

Step 2--Total the General Services Cost Centers (GSCC) found in column 5, on page 4, of the SSA-2552, lines 2-20.

Enter the total GSCC here: $_____

Step 3--Adjust the total GSCC cost for fringe benefits as follows (for the GSCC total to represent true indirect costs, fringe benefits must be purged from the total):

. Determine what portion of fringe benefits (column 5, line 4) relates specifically to employee salaries (e.g., FICA, etc.) by one of the following methods:

- Breakdown of Employee Health and Welfare Costs can be taken from work sheet A-1, column 3.

- If not available, speak to the accounting personnel responsible for the payroll function. Develop with this person a work sheet totalling all fringe costs related to salaries.

.. FICA
.. Retirement Fund
.. Hospital Insurance
.. Unemployment Taxes
.. Workmen's Compensation
.. Any other costs related to salaries

Enter the total fringe benefits here: $_____

Enter the fringe percentage_____

Step 4--Subtract the net fringe benefit cost from the total GSCC for the purpose of determining a true indirect cost:

Enter the total indirect cost: $_____

Step 5--In column 5, take the total of lines 2 through 72.

Total: $_____

Step 6--Subtract the "total indirect" from Step 4 from the "total" in Step 5. The result is the total direct cost used for calculating the indirect cost rate for this study.

Enter the total direct cost: $_____

Step 7--Calculate the indirect cost rate by dividing the total indirect cost (Step 4) by the total direct cost (Step 6). Show your figures below.

$$\frac{\text{Total Indirect Cost (Step 4)}}{\text{Total Direct Cost (Step 6)}} = \text{Indirect Cost Rate}$$

Indirect Cost Rate =_____

In the case that the SSA-2552 does not exist or is not completed, an indirect cost rate must be determined using hospital accounting reports. If the overhead rate has not already been completed by the hospital staff, seek the hospital's working trial balance. This trial balance will likely resemble that of the trial balance found in the SSA-2552, page 4. Calculations may then be developed in a similar fashion.

4. ESTIMATION OF OLD UR COSTS

A "ball park" estimation of the cost of old UR should be developed for FY 1974 (activity data may have to be taken from the last year during which old UR was completed if PSRO was operational in 1974). The following steps should be taken to complete Exhibit IV, following this page:

Step 1--Identify the names and titles of persons involved directly in the old UR program. The titles of these persons should be listed in column 1 of Exhibit IV and the names and titles should be kept on scratch paper so that salaries can be associated with titles and than all record of individual names may be destroyed.

Step 2--Any nonpersonnel resources directly involved in old UR should be listed in column 1.

Step 3--An estimate of the annual percent of time involved in old UR for each staff member or resource listed in column 1 should be placed in column 2.

Step 4--The total FY 1974 dollar cost for each staff type (including fringe) or resource should be listed in column 3.

Step 5--The Dollar Allocation to Utilization Review should be determined as follows:

Column 2		Column 3		Record in Column 4
Percent of Time Doing UR	X	Total Annual Dollar Cost	=	Dollar Allocation to

Step 6--Sum vertically all the costs allocated in column 4 to determine the total cost of UR in FY 1974.

5. EXIT MEETING

(1) Hospital Staff Attending Exit Meeting

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____

EXHIBIT IV

Hospital No._____

Office of Planning, Evaluation, and Legislation

WORK SHEET FOR ESTIMATING FY 1974
UTILIZATION REVIEW COSTS

Column 1	Column 2	Column 3	Column 4
Title of Personnel or Name of Resource	Percent Allocated to UR	Total Annual Dollar Cost (Including Fringe)	Dollar Allocation to UR (1974)
		Total Cost of UR in FY 1974--	

May 12, 1977

IV. POST SITE VISIT TASKS: SUMMARY SHEET, EVALUATION, AND THANK-YOU LETTER

BACKGROUND

In this section:

- Complete Exhibit V, following page IV-2, which summarizes the data collected in Sections II and III.
- Interviewer impressions regarding the accuracy of the data will be documented.
- The interview guide must be finalized and submitted to the Macro Project Manager.
- A thank-you letter will be sent to the hospital contact person by the Macro Project Manager, co-signed by the field staff person who visited the hospital.

Each of the above post-site tasks will be described in this section. The first three of the above tasks should be completed within two days of the end of the PSRO visit. The letter will go out within 10 days.

Field staff should photostat a copy of the completed interview guide and the flowcharts as soon as they leave the hospital and mail them to the Macro Project Manager (unless they will be going to Macro offices within one week). The interview guide should be carefully reviewed for completeness and accuracy before submission to the Project Manager. The information on the guide should be ready for typing and submission to OPEL as part of the final report when it is sent in.

QUESTIONS

1. COMPLETE THE SUMMARY OF PSRO EXPENDITURES BY ACTIVITY CATEGORY (See Exhibit IV, following this page)

   Transcribe entries from the bottom of Exhibit III for the most recent complete fiscal year (completed in Section III) directly onto Exhibit V. The activity columns sum vertically to identify start-up and operating costs. Comment sheets, if any, from Exhibit II should be copied and attached to Exhibit V, following page IV-2. Please double check all totals between Exhibits III and V.

2. EVALUATE THE DATA COLLECTED

   (1) What were the greatest problems in flowcharting the utilization review process?_____

   _____

   _____

   _____

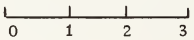
   (2) What were the greatest problems in allocating costs to the review process?_____

   _____

   _____

   _____

   (3) Everything considered, what level of confidence do you have in the flowcharts? (Place X on number line)_____



   0 - The flowcharts are of limited value and do not reflect actual activity.
   1 - The flowchart data are questionable, although they do give a general idea of hospital review activity.
   2 - The flowcharts provide a solid idea of hospital review activity.
   3 - The flowcharts of activities are extremely accurate.

   (4) Additional comments regarding the accuracy of the flowcharts of the hospital review activity.

   _____

   _____

   _____

   _____

   _____

Office of Planning, Evaluation, and Legislation

SUMMARY OF IN-HOSPITAL REVIEW COSTS

Cost for *
Hospital:
Fiscal Year:
☐ Federal Only ☐ Federal and Nonfederal Combined ☐ Nonfederal Patients Only

	Major Review Activities									
	Admission Review (AR) Number AR's Completed: _____		Continued Stay Review (CSR) Number CSR's Completed: _____		Concurrent Review (CR) (CR = AR + CSR) Number of Discharges Covered in Review Program: _____		Medical Care Evaluations (MCE): Medical Audits Number Medical Audits: _____		MCE's: Nurse Number of Nurse Audits: _____	
	FTE's	Direct Cost	FTE's	Direct Cost	FTE's	Direct Cost	FTE's	Direct Cost	FTE's	Direct Cost
Physician										
Donated Physician Time (in Hours)										
Nurses										
Review Coordinator										
Audit Coordinator										
Other Personnel										
Other Nonpersonnel (Computer, Supplies, Etc.)										
Totals										
Unit Costs**										
Total Including Indirect of _____%										
Unit Costs**										

Notes: * When the same review program is employed for federal and nonfederal patients, costs may be combined. When different programs are used, summarize nonfederal costs briefly on a copy of Exhibit IV, mark it as appropriate, and attach to the interview guide.

** Units are: AR--per admission review; CSR--per continued stay review; MCE's--per audit for medical audits, nurse audits, and the combination of medical and nurse audits; CR--per discharge of patients covered under the review program; Abstracting and PA--per abstract completed; General Administration--per hospital; Total All Activities--per discharge of patients covered under the review program.

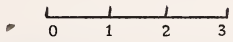
Cost for *
Hospital:
Fiscal Year:
☐ Federal Only ☐ Federal and Nonfederal Combined ☐ Nonfederal Patients Only

	Major Review Activities									
	MCE's: Other Audits Number of Other Audits: _____		Abstracting and Profile Analysis # Discharges Abstracted: _____		UR Committee 1 Hospital: _____		General Administration 1 Hospital: _____		Total All Activities Number of Discharges: _____	
	FTE's	Direct Cost	FTE's	Direct Cost	FTE's	Direct Cost	FTE's	Direct Cost	FTE's	Direct Cost
Physician										
Donated Physician Time (in Hours)										
Nurses										
Review Coordinator										
Audit Coordinator										
Other Personnel										
Other Nonpersonnel (Computer, Supplies, Etc.)										
Totals										
Unit Costs**										
Total Including Indirect of _____%										
Unit Costs**										

Notes: * When the same review program is employed for federal and nonfederal patients, costs may be combined. When different programs are used, summarize nonfederal costs briefly on a copy of Exhibit IV, mark it as appropriate, and attach to the interview guide.

** Units are: AR--per admission review; CSR--per continued stay review; MCE's--per audit for medical audits, nurse audits, and the combination of medical and nurse audits; CR--per discharge of patients covered under the review program; Abstracting and PA--per abstract completed; UR Committee--per hospital; General Administration--per hospital; Total All Activities--per discharge of patients covered under the review program.

(5) Everything considered, what level of confidence do you have in the cost data? (Place X on the number line)



0 - The data are of limited value.
1 - The data indicate a general distribution of costs, but specific data are questionable.
2 - The data provide a reasonable or solid idea of the real cost by activity category.
3 - The cost data probably could not be much more accurate even if time sheets were available.

(6) Additional comments regarding the accuracy of the cost data. _____

_____

_____

_____

_____

_____

3. INTERVIEW GUIDE SUBMITTED TO PROJECT MANAGER

(1) Date Submitted (or mailed)_____

(2) Date Received_____

4. THANK YOU LETTER

See Exhibit VI, following this page, for a prototype letter.

(1) Date Sent by Macro Hospital Liaison Person _____
(Attach copy)

(2) Carbon Copies To:

☐ Project Manager

☐ Other, identify _____

EXHIBIT VI

HOSPITAL SITE VISIT THANK YOU LETTER

- Date -

Dear _____:

On behalf of the Office of Planning, Evaluation, and Legislation (OPEL); Health Services Administration (HSA); the Bureau of Quality Assurance (BQA); and ourselves, we wish to thank you for assisting us to determine the costs of your review program. Our sessions at your hospital were highly productive and will contribute substantially to the overall goal of developing estimates of program costs in your area as well as providing an indication of overall national costs.

(Insert anecdotal line, if appropriate)

It was most enjoyable working with you. Thank you again for your cooperation.

Sincerely,

(Sign name of field staff)
MACRO SYSTEMS, INC.

Names of field staff
Macro title

cc: Macro Project Manager

May 12, 1977

APPENDIX C

ADDITIONAL DETAIL ON METHODOLOGY USED FOR PSRO LEVEL DATA COLLECTION NOT ADDRESSED IN THE TEXT OR THE INTERVIEW GUIDES

ADDITIONAL DETAIL ON METHODOLOGY USED FOR PSRO-LEVEL DATA COLLECTION NOT ADDRESSED IN THE TEXT OR THE INTERVIEW GUIDES

This appendix is intended to provide additional detail on the methods used to develop PSRO-level data and should be used to supplement the information already documented in the interview guides (see Appendices D and E) and in the text of the final report. Three key areas require further clarification including:

- Definitions for chart collecting "General PSRO Data Over Three Fiscal Years" (see Exhibit II in the interview guides)
- The methods used to develop descriptions of each activity category prior to the allocation of PSRO expenditures to the categories
- The treatment of fiscal data when problem figures arose

1. CARE MUST BE EXERCISED TO COLLECT ACTIVITY DATA THAT ARE COMPARABLE ACROSS PSRO'S BECAUSE, ALTHOUGH TERMINOLOGY IS THE SAME, INDIVIDUAL DEFINITIONS HAVE DEVELOPED AS TO WHAT THEY MEAN

Both PSRO-level interview guides contain Exhibit II, General PSRO Data Over Three Fiscal Years, which is designed to collect basic activity data about the number of hospitals being reviewed, the number of discharges covered, etc. Because many of the items requested correspond to parts of the BQA 121 form required from all PSRO's, the project team assumed that their definitions could easily be understood. This was not the case, so Exhibit C-I, Alternative Definitions Used In Completion of Exhibit II (following this page) was developed.

The classification of hospitals as delegated, nondelegated, or partially delegated and as having no PSRO review was straightforward for all PSRO's. Also, line 2 identifying how many hospitals that were not fully delegated but were doing delegated CR or delegated MCE's caused no problems. Beginning with line 3 on the interview guide, Exhibit II, the definitions on Exhibit C-I, following this page, were used. Because, in some cases, data under our

EXHIBIT C-1(1)

ALTERNATIVE DEFINITIONS USED
IN COMPLETION OF EXHIBIT II*
OF THE PSRO LEVEL INTERVIEW GUIDE

3. "Number of discharges" was interpreted as either:

   (1) The number of discharges reviewed (i.e., the number reviewed whether certified or denied, whether referred to a physician advisor or not, and whether review was performed on a concurrent or retrospective basis. Cases that were discharged prior to review are not included.), or

   (2) The total number of discharges in the payment category (i.e., federal or nonfederal) regardless of whether they were reviewed or not.

4. "Number of admissions," where it was reported, was interpreted in the same way as number of discharges in 3. above.

5. "Number of Patients Reviewed" was interpreted as:

   (1) The number of patients receiving admissions and/or continued stay review whether concurrent or retrospective (each patient reviewed counts as one regardless of the number of reviews), or

   (2) The number of patients who received continued stay review whether concurrent or retrospective (each patient reviewed counts as one regardless of the number of reviews).

6. "Number of Review Coordinator Reviews" was interpreted as:

   (1) The number of continued stay reviews performed by review coordinators (By this definition, if a review coordinator seeks assistance from another review coordinator, or refers the case to a physician advisor, the process of certifying or denying an extension, the incident is counted as one review. A single patient may receive several continued stay reviews, however, because two or more extensions may be required for a single episode of hospitalization.), or

   (2) The number of admissions reviews plus the number of continued stay reviews (with the same counting rules as described in 6. (1) above), or

   (3) The number of continued stay reviews by review coordinators (RC) plus the number of reviews performed by physician advisors (PA) when cases are referred to them (The same counting rules as in 6. (1) above are applied with the exception that whenever a PA is called upon to assist in certifying or denying an extension, the activity is counted as two reviews; one for the RC and one for the PA), or

   (4) The number of admissions reviews plus the number of continued stay reviews plus the number of admissions and continued stay reviews performed by the PA. (Thus, a review including RC activity that is referred to the PA is counted as two, one for the RC and one for the PA. This occurs for both admissions and continued stay reviews.)

---

* In the PSRO cost study our preferred definition is always number "(1)." However, if this number is difficult or impossible to calculate, numbers defined below are requested along with some suggestions from the PSRO as to how we might adjust to estimate (1).

EXHIBIT C-I(2)

ALTERNATIVE DEFINITIONS USED
IN COMPLETION OF EXHIBIT II*
OF THE PSRO LEVEL INTERVIEW GUIDE

7. "Number of Referrals to Review Physicians" was interpreted as:

(1) The number of admissions reviews in which the PA was involved, plus the number of continued stay reviews with PA involvement.

(2) The number of continued stay reviews in which the PA was involved.

(3) The number of admission reviews in which the PA was involved.

preferred definition were expected to be unavailable, we requested that the PSRO identify the definition they used and suggest a means of adjusting the available figures to meet our needs. When the data came in, it turned out that only minor adjustments were necessary in several PSROs due to inaccessability of needed data.

2. DIFFERENTIATION OF START-UP AND OPERATING ACTIVITIES WAS THE KEY FOCUS OF THE ACTIVITY CATEGORY DEFINITION

During each PSRO site visit, there were two major sequential activities, including the:

- Development of activity category descriptions, i.e., definition of cost centers for PSRO activity.
- Allocation of PSRO expenditures to the activity categories based on the descriptions developed.

The development of activity category definitions was the key element because this determined how the expenditures would later be allocated. PSRO personnel familiar with the activity category areas were interviewed extensively to determine what tasks the PSRO completed in each category. This was a highly iterative process, where the information was taken from one source and confirmed by others.

Activity category definition could be very complex. Because the activity categories are sequential, the lines between them are sometimes difficult to draw. For instance, the following categories are closely related:

- Develop CR and MCE system
- Pilot test and refine CR and MCE system

It was often unclear where systems development ended and pilot testing and refinement began. In such cases, after discussion of what happened, the PSRO personnel's best judgment was used to decide in which category a particular task should be placed.

During activity category classification, particular emphasis was placed on accurate classification of tasks when uncertainty was experienced between a start-up and an operating cost category. Generally, after careful discussion of the task, it could be clearly identified as either recurring (i.e., operating) or nonrecurring (i.e., start-up).

The point to be made is that, when a confusing task was identified, the project team worked with the PSRO staff to remind them of the objectives of the study and the categories to help them classify it. When the problem was a start-up vs operating dilemma, increased attention was paid to make sure it was classified appropriately.

3. UNIFORM RULES WERE DEVELOPED IN RESPONSE TO SEVERAL UNFORESEEN PROBLEMS IN EXPENDITURE ALLOCATION

The problems and project team treatment of them are as follows:

- The PSRO paid review coordinators at delegated hospitals--When this was encountered, the cost of the review coordinators was included in the cost of "non or partially delegated review." However, for the purposes of calculating the unit cost of nondelegated review, this cost was excluded.

- The PSRO incurred costs for nonfederal review--Generally, nonfederal review costs were segregated from federal costs by PSRO accounting, and they were included in our study on line 20, Activities Focused in Nonfederal Patients. Where these costs were not segregated or did not really reflect the level of expenditures the PSRO made for each group of patients, the figures used were adjusted based on instructions provided by PSRO staff.

- The PSRO incurred costs for various activities not related to PSRO review--Where this situation arose, the costs incurred for nonreview activity were included in line 20, whether the benefits accrued exclusively to nonfederal patients or not. The rationale here was to include only the true cost of acute care PSRO UR and its support in our figures.

APPENDIX D

INTERVIEW GUIDE FOR THE PSRO LEVEL EXPENDITURE ALLOCATION STUDY
(Predominantly Delegated Areas)

PSRO Number _____
PSRO Contact Person _____
PSRO Name _____
PSRO Telephone Number _____
Macro Field Staff _____

Submitted to: _____
Date Submitted: _____

May 9, 1977

i. INTRODUCTION TO THE DELEGATED PSRO INTERVIEW GUIDE

This interview guide is designed to assist Macro site visit teams in working with Professional Standards Review Organization (PSRO) staff to allocate PSRO expenditures to various activity cost centers. In addition, it identifies how to make initial contacts to delegated hospitals that were randomly selected to participate in the companion study on PSRO in-hospital review costs. It takes approximately two days on site to gather the information to complete this interview guide. The purpose of the interview guide is to ensure that the site visit teams use a uniform approach to data acquisition at each PSRO. Thus, the guide provides detailed instruction from the initiation to the completion of all PSRO contact to assure that all needed information is developed correctly in the shortest time possible.

The guide is broken into an introduction and five sequential sections:

- i. Introduction to the interview guide
- ii. Pre-site visit tasks: initial contact and confirmation letter
- I. Initial meeting with the PSRO: summary of study objectives, overview of PSRO development, and initial hospital contact
- II. Development of descriptions of PSRO activities
- III. Allocation of PSRO expenditures to the activities and exit interview
- IV. Post-site visit tasks: summary sheet, evaluation, and thank-you letter

APPENDIX D

INTERVIEW GUIDE FOR THE PSRO LEVEL EXPENDITURE ALLOCATION STUDY (Predominantly Delegated Areas)

PSRO Number _____
PSRO Contact Person _____
PSRO Name _____
PSRO Telephone Number _____
Macro Field Staff _____

Submitted to: _____
Date Submitted: _____

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- II. Development of descriptions of PSRO activities
- III. Allocation of PSRO expenditures to the activities and exit interview
- IV. Post-site visit tasks: summary sheet, evaluation, and thank-you letter

Within each section, there are two subsections: "Background" and "Questions and Instructions." The "Background" subsections describe the interview process, provide perspectives as to how the section fits with the overall interview, and give some insight into areas of sensitivity that may be encountered. The "Questions and Instructions" subsections provide a list of the questions that must be answered and give detailed instruction when necessary. All information needed for completion of the interview guide is contained in this document. Space is provided for comments at various points throughout the interview guide so that even anecdotal information may be systematically documented.

Sections i, ii, and IV will be completed off site. Sections I, II, and III will be completed while working with PSRO staff on site.

ii. PRE-SITE VISIT TASKS: INITIAL CONTACT AND CONFIRMATION LETTER

BACKGROUND

During initial communications with PSRO officials, project team members must be sensitive to the concerns of the PSRO staff. For instance:

- Interest in the way a PSRO has utilized its funds is likely to be viewed with great concern
- The many unresolved policy issues surrounding PSRO operations have caused considerable strain in the relations between the various levels of government concerned
- PSRO's receive many time-consuming information requests from representatives of all levels of government

To minimize PSRO anxieties, the project team will pay particular attention to precision and economy in our communications with all PSRO officials. The questions in this section of the interview guide have been designed to limit slippage and errors by detailing all activities required and providing a form for documentation of each step as it is completed.

The section begins with the documentation of the initial PSRO contact, as provided to the Macro project manager by OPEL. (OPEL will make preliminary contacts with the PSRO's to assure their cooperation and may make tentative arrangements before turning the information over to Macro.) The site team leader responsible for data collection at a specific PSRO, will then telephone the PSRO and finalize the date and time of the site visit.

During the initial Macro telephone call to the PSRO, the site team leader will:

- Briefly explain the nature of the study using the outline shown below in "Questions and Instructions" and explain the time commitment PSRO staff need to make (the limit is two days because we will be on site only two days)

- Explain the need to contact randomly selected hospitals for on-site work at a later date to identify hospital-level review costs

- Inform the PSRO that all information gathered will be kept confidential

- Identify a firm appointment for the site visit

- Ask the PSRO contact to recommend a hotel/motel (this can save us considerable time and expense)

- Confirm with the PSRO their mailing and street address

- Assess the extent of the PSRO's interest, cooperation, or concern regarding the study and document problem areas for pre-site briefing on sensitive areas

A letter confirming the site visit arrangements will be sent to the PSRO as soon as possible after the initial Macro telephone call (includes cc's to the OPEL project leader and the Macro project manager). A prototype confirmation letter appears in Exhibit ii-I, following "Questions and Instructions." In addition, before arriving at the PSRO, folders should be assembled for each of the ramdomly selected delegated hospitals so that hospital contacts and documentation can be completed with minimal effort on the part of both the PSRO staff and the site team.

PSRO No._____

QUESTIONS AND INSTRUCTIONS

1. OPEL PSRO CONTACT (Supplied by OPEL)

(1) PSRO Name:_____

(2) Person Contacted:_____ Phone: (____)_____

(3) Title:_____

(4) PSRO Mailing Address:_____

_____

_____

(5) PSRO Street Address (If different from mailing):_____

_____

_____

(6) Name of OPEL Staff member who contacted PSRO:_____

Date of contact:_____

(7) Tentative site visit arrangements (If any):_____

_____

(8) Comments by OPEL:_____

_____

_____

_____

2. MACRO INITIAL PSRO CONTACT

(1) Person(s) Contacted	Title	Telephone	Date
Complete during conversation			

(2) Points To Be Covered During Initial Telephone Contact

a. This is _____ of Macro Systems, Inc., calling to discuss with you your participation in a Health Services Administration Study of PSRO costs.

b. _____ spoke with you about this study on _____.
OPEL staff contact shown in 1.(6) above (date of contact)

c. The purpose of this study is to determine:

- PSRO level costs and activities in nine PSRO areas throughout the country.
- In-hospital PSRO review costs in six PSRO areas throughout the country. From six to fourteen hospitals will be interviewed in each PSRO area, depending on the total number of hospitals in an area.
- In-hospital pre-PSRO review costs in three non-PSRO areas. Fourteen hospitals will be interviewed in each of these areas.

(Section I Study Objectives provides more detail on these points.)

d. Your PSRO was selected based upon the:

- Length of PSRO operation
- Accessibility of data for other companion studies in the area
- Geographical balance (representativeness)

e. Macro on-site activities will include working with the Executive Director, assistants who are familiar with most PSRO activities to date, and the financial staff person. It is important that all persons be present during our site visit.

f. Macro site team members and PSRO staff members will complete the following activities during the site visit:

- Develop a brief narrative about PSRO tasks in predefined activity areas
- Allocate PSRO expenditures into these activity areas from day one to the latest data available
- Collect basic statistics on the number of hospitals and the total number of reviews in the area

All cost information from individual PSRO's and activity data will be reported in such a way that the PSRO cannot be identified.

g. It is anticipated that PSRO staff need to be available for most of the two days. Macro field staff are on site to complete the allocation of costs. The product of Macro's work will be:

- A chart showing expenditures for start-up versus operating costs
- A brief narrative describing what the money was spent on in these areas

h. Macro is also developing in-hospital review costs in your area, in addition to the allocation of PSRO level costs. During our site visit we would like to ask your assistance in contacting the random sample of _____ hospitals selected in your area.
(number)

i. What day would it be most convenient to meet? We were hoping for _____ (make suggestion).

(3) Confirmed Site Visit Date

a. Date of meeting: _____ Time: _____

b. PSRO officials attending initial orientation meeting with Macro:

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

c. Building and room number: _____

d. Address (If different from above): _____

_____

e. Hotel/motel recommended: _____

Telephone (Get from Information): _____

(4) Comments And Important Items Discussed During Phone Conversation: _____

_____

Complete after conversation _____

_____

_____

(5) Comments Upon Perceived Cooperation Of PSRO:

_____Unqualified cooperation _____Qualified (Describe problems below)

_____

Complete after conversation _____

_____

_____

3. PSRO SITE VISIT CONFIRMATION LETTER (Prototype follows this page)

   a. Date letter sent:_____

   b. Courtesy copies of site visit confirmation letter sent to (Check when sent):

      ☐ Macro Project Manager

      ☐ OPEL Project Officer

4. ASSEMBLE FOLDERS ON EACH RANDOMLY SELECTED HOSPITAL AND ASSIGN THE HOSPITAL'S CODE NUMBER

Prior to PSRO contact, the delegation status of each hospital in the PSRO is identified based on records from the Bureau of Health Insurance, SSA. The number of hospitals that must be visited is then calculated using standard statistical formulae based on the expected variance in CR costs in the area, the number of hospitals in the area, and the confidence and precision levels desired. Then, all of the area hospitals are stratified based on size (200 beds and over versus less than 200 beds) and teaching status (teaching versus nonteaching). Finally, using a random numbers table, an appropriate number of hospitals is selected from among the fully delegated group in each strata and listed in order of their selection.

Before making the site visit to the PSRO, a folder should be assembled and the hospital code number assigned.

PSRO SITE VISIT CONFIRMATION LETTER

-Date-

Mr. John Smith
Executive Director
Smithfield Medical Foundation
2426 Trout Circle
Smithfield, Illinois 60623

Dear Mr. Smith:

We appreciate your willingness to participate in the nationwide study Macro Systems is conducting for the Health Service Administration (HSA), Office of Planning, Evaluation, and Legislation (OPEL). This letter is to confirm our meeting at _____ on _____, 1977. At that time, we would
(Time) (Day of the week and date)
like to further review the objective of our study and the actual activities we will be engaged in while at your PSRO. Therefore, we hope that your financial staff person and chief assistants can attend this orientation meeting so that they will each understand our purpose as well as the activities planned for the two-day visit.

The objective of our visit is to allocate your expenditures into approximately 20 activity areas and to differentiate between the initial set-up costs of a PSRO program and the ongoing operational costs. To clarify the activity areas so that effective cost allocations can be made, we will work with you to develop a synopsis of tasks your PSRO has completed in each of the 20 areas since the start of your program. We will then work with you to allocate your expenditures to these activities. All written products we develop will be confidential and will appear only in either aggregate or coded form in any work submitted to the Health Services Administration.

In addition to developing PSRO-level activity costs, we would like to determine actual in-hospital review costs in your PSRO area. To accomplish this task, several weeks after we visit you, we will interview hospital administrators and review coordinators to determine hospital review activity. In order to assure statistical confidence in the data collected, we must visit _____ of the fully delegated hospitals in your PSRO area.
(number)
We would like to have your staff assist us by making the initial contact with appropriate hospital personnel.

If you have any questions, please contact me at (301) 585-6939. We look forward to meeting with you on _____, _____. Thank you very much for your cooperation.
(Day of the week, date)

Sincerely,

(Name)
Project Manager

MACRO SYSTEMS, INC.

cc: OPEL Project Officer

I. INITIAL MEETING WITH THE PSRO: STUDY OBJECTIVES AND OVERVIEW

BACKGROUND

The initial meeting with the PSRO will include the Executive Director, the Deputy or Assistant Director, the Chief Financial Officer, and other knowledgeable PSRO officials the Executive Director wishes to include in the meeting. Both members of the Macro site team will be present. The objective of the meeting will be to:

- Present the study objectives and go over the interview guide briefly so that all present will know what to expect and have the opportunity to ask questions
- Listen to a brief summary of the history and evaluation of the PSRO as presented by the staff
- Work with the PSRO staff to go over the 20 basic activity areas (see Exhibit I, following page I-5) and to develop a tentative schedule for the remainder of the on-site effort, including completion of the General PSRO Data sheet (see Exhibit II, following "Questions and Instructions") and hospital contacts
- Identify important demographic information to be used to develop a general description of the PSRO. Several hypotheses concerning possible relationships between PSRO's and their respective costs will be tested using demographic information.

Clarification of study objectives will facilitate the rapid transfer of knowledge from PSRO to Macro staff, saving time for all of us. It will also help establish rapport and reduce any anxieties the PSRO may have regarding who we are and what we are really doing.

Finally, once the PSRO staff understands the nature of our informational needs and we have a basic overview of PSRO activities, we can work with the staff to schedule the rest of the on-site work. Generally, group meetings are preferable to individual interviews because PSRO staff can provide immediate feedback to one another and rapidly reach consensus on key PSRO tasks. However, if the PSRO officials would like separate interviews, the Macro team will develop a tentative appointment schedule for individual interviews. When the initial meeting is complete, a short break may be suggested before plunging into Section II.

QUESTIONS AND INSTRUCTIONS

1. OPEN THE MEETING BY INTRODUCING THE STUDY TEAM AND MAKING INTRODUCTIONS AROUND THE ROOM. Send an attendance sheet around to identify the attendees as follows:

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2. DISCUSS THE STUDY OBJECTIVES AND FIELD QUESTIONS

The objective of this part of the PSRO cost evaluation study is to identify the cost of setting up and operating your PSRO. Nondelegated review costs are included as PSRO level costs; however, delegated review costs will be excluded. More specifically:

- Set-Up Costs Must Be Identified--The nonrecurring costs of setting up a PSRO must be identified and included as PSRO level costs. Examples of these costs include finding and furnishing space, planning and testing programs, developing standards and criteria, implementing programs, and acquiring data services.

- Ongoing Operating Costs Must Be Identified--The annual recurring costs of PSRO operations must be assessed. Examples of these costs include program monitoring, program evaluation, data processing costs, criteria review, and nondelegated review costs.

- Delegated Review Costs Are Assessed In A Separate Related Part Of The Study--The In-Hospital Review Cost Identification Guidelines are used to determine delegated PSRO costs.

The differentiation between these types of costs is important to the overall PSRO evaluation strategy because the Department of Health, Education, and Welfare (HEW) must know with greater specificity how much it costs to set up a PSRO and, once established, how much it costs to operate one.

PSRO setup costs are expected to go down over time because new organizations will be able to adapt and refine programs developed by current PSRO's, with consequent setup cost savings to HEW. At the same time, as more and more PSRO's achieve a stable operating level, the Federal government will have to support their continued operation. Expected operating costs are not known at this time, so it is difficult to estimate the level of financial commitment required or to evaluate the cost effectiveness of the PSRO program.

3. PSRO STAFF PRESENTS BRIEFING ON PROGRAM DEVELOPMENT

Interviewer documents key points below. Attach any handouts to the interviewer guide, with explanations as needed.

a. Fiscal year begins:_____ Ends:_____

b. Date PSRO began:_____

c. Date foundation activity began, if related:_____

d. Brief history and comments on PSRO development

4. DISCUSS THE TWENTY ACTIVITY CATEGORIES AND IDENTIFY THE PSRO PERSONNEL MOST KNOWLEDGEABLE ABOUT EACH ONE

Pass out Exhibit I, following this page, and discuss the relationships between the categories.

5. DEVELOP TENTATIVE SCHEDULE FOR REMAINDER OF SITE VISIT

a. Complete Exhibit II, following Exhibit I. The data identified will be used for analytical purposes such as showing the types of activities that were occurring during the three years of PSRO operation. In certain cases (e.g., number of nonfederal admissions and discharges, or number of nonfederal reviews), the PSRO may not have data. If not, work with the PSRO official providing the data to develop the best reasonable estimate. Be sure to document the origin of the number in comments.

b. Schedule for all other appointments:

Name(s)	Title	Topic	Time and Place

6. DISCUSS THE BEST STRATEGY FOR HOSPITAL CONTACT AND INITIATE CONTACT BASED ON DOCUMENTATION FROM THE HOSPITAL LEVEL INTERVIEW GUIDE

PSRO ACTIVITY CATEGORIES

1. Develop System for CR and MCE Review in Acute Care Hospitals
2. Professional Relations, Initial:
   a. Physicians
   b. Hospitals
   c. Nonphysician professionals
3. Professional Relations, Continuing:
   a. Physicians
   b. Hospitals
   c. Nonphysician professionals
4. Initial Assessment and Baseline Data
5. Develop Norms, Standards, and Criteria (Cut Off at Manual Publication)
6. MOU Development
7. Administration, Initial:
   a. Salary
   b. Nonpersonnel
8. Administration, Continuing:
   a. Salary
   b. Nonpersonnel
   c. Space
9. Plan and Let Data Contract
10. Data Processing
11. Refine PSRO Review Plan and Complete Pilot Testing
12. Implement CR Plans:
    a. Training
    b. Hospital assistance
13. Implement MCE Plans
    a. Training
    b. Hospital assistance
14. Ongoing Criteria Development
15. Manage, Monitor, and Evaluate Delegated and Nondelegated Review (MCE's and CR)
16. Areawide MCE's
17. Non- and Partially Delegated Review
18. LTC Review
19. Ambulatory Care Review
20. Activities focused on nonfederal patients

May 9, 1977

EXHIBIT II

GENERAL PSRO DATA OVER
THREE FISCAL YEARS

PSRO No. _____

	FY I			FY II			FY III			
	Delegated	Non- or Partially Delegated	No PSRO Review	Delegated	Non- or Partially Delegated	No PSRO Review	Delegated	Non- or Partially Delegated	No PSRO Review	Comments
1. No. of hospitals in PSRO area										
2. Not fully delegated but doing delegated: a. CR										
b. MCE's										
3. Number of discharges: a. Federal										
b. Nonfederal										
4. Number of admissions: a. Federal										
b. Nonfederal										
5. Number patients reviewed: a. Federal										
b. Nonfederal										
6. Number of review coordinator reviews: a. Federal										
7. Number of referrals to review physician: a. Federal										
b. Nonfederal										

Title of person providing data: _____

☐ From PSRO records; ☐ From individual hospital data _____

☐ Other, explain _____

May 9, 1977

II. DEVELOPMENT OF DESCRIPTIONS OF PSRO ACTIVITIES

BACKGROUND

The purpose of this section is to describe the major activities that the PSRO has completed since its inception. In order to do this, the tasks that the PSRO has carried out will be classified into 20 more general activity categories which were developed as a result of previous Macro field work (See Exhibit I, following page I-5, for a complete list of the activities). The ultimate objective of this section is to describe, and thereby define, the tasks supporting each activity category so that in Section III we will be able to assign all PSRO expenditures to one of the categories. In other words, the activity categories will become cost centers. However, before costs may be allocated, we must adequately describe each activity category in terms of the specific tasks that each PSRO has completed, or is in the process of completing, to carry out its responsibilities.

The development of activity category descriptions may best be completed by meeting with the PSRO Executive Director, the Chief Financial Officer, and other top assistants knowledgeable about PSRO's activities from its beginning. PSRO's are expected to have completed different tasks in each activity area, so individuals familiar with the PSRO's development will be our primary resource. The Macro team must elicit each task from the PSRO officials, discuss it to make sure it is understood, and place it in the appropriate activity category.

This section provides background and two exhibits designed to make it possible to complete the activities description portion of the study in minimal time. The purpose of using these forms is threefold:

- They allow classification of all PSRO activities into appropriate uniform activity categories for all PSRO's. For the purposes of this interview guide, PSRO activities may be described as those tasks the PSRO has engaged in or accomplished to date. Each activity identified at a PSRO can be classified in one of the activity categories because they were designed to encompass the universe of possible PSRO activities. The activity categories will serve as cost centers in allocating PSRO costs (see the comprehensive list of categories in Exhibit I). The difference between what is meant by PSRO activity and the activity category can be illustrated as follows. Mailing invitations to physicians to join the PSRO is a typical PSRO activity. This activity would be classified within the "professional relations - initial, a. physicians" activity category (see PSRO Activity Categories - Exhibit I).

- Their use helps define precisely, in the PSRO's own terms, what tasks are included in each activity category so that this will be clear when PSRO expenditures are allocated to the activity categories in Section III.

- They help identify different PSRO implementation and operational approaches useful in understanding what actually occurs at the PSRO level.

The site team approach will be flexible in developing the narrative descriptions of PSRO activity. However, it is generally preferable to work in groups of several knowledgeable PSRO staff persons (e.g., the Executive Director, Assistant Director). This allows an interplay between two or more persons' memories, resulting in rapid completion of the tasks due to the possibility for immediate feedback and discussion. Whether the information is developed in small groups or in individual interviews, the same basic approach will be taken. Each PSRO staff member will be briefed upon initial contact about:

- The purpose of the study

- How the narrative descriptions of PSRO activities fit into the cost allocation strategy

During the individual or group interviews, the Macro team should give copies of Exhibit I, PSRO Activity Categories, to all PSRO staff members present. It should be explained that all PSRO activities to date will be classified in the activity categories list. At this point in the interview, the PSRO staff should be given time to review the activity categories list. After reviewing Exhibit I, the Macro team and the PSRO staff members will discuss each activity category. The Macro site visit team will explain each activity category, taking care not to lead the PSRO staff by suggesting things they might have done. If a PSRO staff member does not feel knowledgeable about discussing an activity category, then identify another PSRO staff person(s) who is more knowledgeable about the activity category and speak to him or her.

The product of our effort will be the development of data points describing PSRO tasks in each activity category documented on the work sheets in Exhibit III, PSRO Activity Category Work Sheet. Exhibit III consists of a work sheet for each activity category listed in Exhibit I. Each Activity Work Sheet includes explanations or definitions to assist Macro and PSRO staff in identifying which activity category a particular PSRO task should be assigned to. The activity categories are listed in rougly chronological order; i.e., the first listed activities are likely to be completed early in the PSRO's development and activities lower on the list were probably completed later in PSRO development. As PSRO staffers identify different activities completed, Macro will discuss and clarify them in appropriate categories and document them on the activity work sheets.

As soon as possible after completion of the work sheets, the Macro team should edit in "dot point" the major PSRO activities documented under each activity category so that all will be concisely summarized. The summary of PSRO activities must be developed as a final product for typing at Macro. However, its most immediate and important use will be on-site for defining what is included in each activity category for use in PSRO expenditure allocation in Section III, following this section.

QUESTIONS AND INSTRUCTIONS

1. Using Exhibit I from Section I to make sure the PSRO staff remembers the relationship between the categories, complete Exhibit III. Discuss and begin documenting tasks on the appropriate work sheets. Generally, completing the work sheets in the order provided is the most effective. However, moving back and forth from category to category, as PSRO officials remember new details, is essential.

PSRO ACTIVITY CATEGORY WORK SHEET

1. DEVELOP SYSTEM FOR CR AND MCE REVIEW IN ACUTE CARE HOSPITALS

List activities in chronological order or developmental sequence where possible. MCE development activity is usually very limited. Describe MCE development activity separately from CR development. Where work is being completed on review systems for long-term or ambulatory care, the activities should be classified on Sheets 18 and 19, as appropriate.

Activity category numbers 1, 11, 12, and 13 are related. The relationship is:

- Number 11 begins after initial system is developed for CR and MCE review in acute care hospitals.
- Number 11, Refine PSRO Review Plan and Complete Pilot Testing, may be skipped in favor of immediate implementation of the CR and MCE systems (Numbers 12 and 13).

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

2. PROFESSIONAL RELATIONS - INITIAL

a. Physicians

Initial professional relations include all activities that the PSRO feels were performed to develop contacts and establish basic relationships for PSRO operation. If a special new project must be launched by the PSRO to deal with a new problem in a group with whom PSRO relations have already been established, this should be classified as a "continuing" activity. However, when special campaigns must be undertaken by the PSRO to relate to a new group regarding the implementation of reviews in long-term or ambulatory settings, the activities will be classified as "initial" (for the present, all LTC and ambulatory activities should be shown in 18 and 19 respectively).

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

2. PROFESSIONAL RELATIONS - INITIAL

b. Hospitals

Initial professional relations include all activities that the PSRO feels were performed to develop contacts and establish basic relationships for PSRO operation. If a special new project must be launched by the PSRO to deal with a new problem in a group with whom PSRO relations have already been established, this should be classified as a "continuing" activity. However, when special campaigns must be undertaken by the PSRO to relate to a new group regarding the implementation of reviews in long-term or ambulatory settings, the activities will be classified as "initial" (for the present, all LTC and ambulatory activities should be shown in line 18 and 19 respectively).

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

2. PROFESSIONAL RELATIONS - INITIAL

c. Nonphysician Professionals

Initial professional relations include all activities that the PSRO feels were performed to develop contacts and establish basic relationships for PSRO operation. If a special new project must be launched by the PSRO to deal with a new problem in a group with whom PSRO relations have already been established, this should be classified as a "continuing" activity. However, when special campaigns must be undertaken by the PSRO to relate to a new group regarding the implementation of reviews in long-term or ambulatory settings, the activities will be classified as "initial" (for the present, all LTC and ambulatory activities should be shown in line 18 and 19 respectively).

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

3. PROFESSIONAL RELATIONS - CONTINUING

a. Physician

At some point the PSRO will feel that professional relations have basically been established. At that time, professional relations activities shift to a more steady month-by-month (or quarter-by-quarter) routine. These are continuing, as opposed to initial, activities. If a special new project is launched in response to specific problems well into the history of the PSRO after the continuing level has been achieved, they should be classed as "continuing." However, when special campaigns must be undertaken to relate to a new group regarding the implementation of review in long-term or ambulatory settings, these activities will be classed as "initial." For the present, all LTC and ambulatory activities should be shown in 18 and 19, respectively.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

3. PROFESSIONAL RELATIONS - CONTINUING

b. Hospitals

At some point the PSRO will feel that professional relations have basically been established. At that time, professional relations activities shift to a more steady month-by-month (or quarter-by-quarter) routine. These are continuing, as opposed to initial, activities. If a special new project is launched in response to specific problems well into the history of the PSRO after the continuing level has been achieved, they should be classed as "continuing." However, when special campaigns must be undertaken to relate to a new group regarding the implementation of review in long-term or ambulatory settings, these activities will be classed as "initial." For the present, all LTC and ambulatory activities should be shown in 18 and 19, respectively.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

3. PROFESSIONAL RELATIONS - CONTINUING

c. Nonphysician professionals

At some point the PSRO will feel that professional relations have basically been established. At that time, professional relations activities shift to a more steady month-by-month (or quarter-by-quarter) routine. These are continuing, as opposed to initial, activities. If a special new project is launched in response to specific problems well into the history of the PSRO after the continuing level has been achieved, they should be classed as "continuing." However, when special campaigns must be undertaken to relate to a new group regarding the implementation of review in long-term or ambulatory settings, these activities will be classed as "initial." For the present, all LTC and ambulatory activities should be shown in 18 and 19, respectively.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

4. INITIAL ASSESSMENT AND BASELINE DATA

This includes both the assessment of provider facilities to determine whether or not they should be delegated and the identification of baseline utilization data for the area.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

5. DEVELOP NORMS, STANDARDS, AND CRITERIA

The developmental effort ends with the publication of the First Screening Criteria Manual. Further activity will go into "Ongoing Criteria Development;"(see number 14). LTC and ambulatory care criteria development go in 18 and 19, respectively.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

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PSRO ACTIVITY CATEGORY WORK SHEET

6. MEMORANDUM OF UNDERSTANDING (MOU) DEVELOPMENT

Initial MOU development and negotiation falls in this category. If MOU's are renegotiated after the first year or when a new institution opens requiring the development of a new MOU, this activity shall be part of "Monitor and Evaluate Delegated Review," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

7. GENERAL ADMINISTRATION - INITIAL

a. Salary

All activities of a nonrecurring nature not fitting into other categories but required to set up the PSRO should be classified under this category. However, once the PSRO has been established, costs for expansion or relocation will fall into Administration - General, number 8. Generally, the PSRO will be assumed to be established by the beginning of the second fiscal year.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

7. GENERAL ADMINISTRATION - INITIAL

b. Nonpersonnel

All activities of a nonrecurring nature not fitting into other categories but required to set up the PSRO should be classified under this category. However, once the PSRO has been established, costs for expansion or relocation will fall into Administration - General, number 8. Generally, the PSRO will be assumed to be established by the beginning of the second fiscal year.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

8. ADMINISTRATION - CONTINUING

a. Salary

Recurring activities that do not fall into other categories should be classified in this category. As noted in 7 above, once the PSRO has been established, costs for expansion, new furniture acquisition, or relocation will be classified in this category.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

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PSRO ACTIVITY CATEGORY WORK SHEET

8. ADMINISTRATION - CONTINUING

b. Nonpersonnel (except space)

Recurring activities that do not fall into other categories should be classified in this category. As noted in 7 above, once the PSRO has been established, costs for expansion, new furniture acquisition, or relocation will be classified in this category.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

8. ADMINISTRATION - CONTINUING

c. Space

Recurring activities that do not fall into other categories should be classified in this category. As noted in 7 above, once the PSRO has been established, costs for expansion, new furniture acquisition, or relocation will be classified in this category.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

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PSRO ACTIVITY CATEGORY WORK SHEET

9. PLAN AND LET DATA CONTRACT

During the first two fiscal years, substantial effort may be required to acquire data services, develop software, and work out paperwork flow problems. These activities fall into this category. Beginning in the third fiscal year, however, the basic system should be established. Systems changes, contract renegotiation, etc., occurring in the third fiscal year or later will be classed as "Data Processing" activities. LTC and ambulatory care development and processing activities fall into number 18 and 19, as appropriate.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

10. DATA PROCESSING

Includes all entry, processing, and output activities. Also includes all contract negotiation and systems changes activities occurring after the second fiscal year. LTC and ambulatory care systems costs should be classified in their respective lines, i.e., 18 and 19.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

9. PLAN AND LET DATA CONTRACT

During the first two fiscal years, substantial effort may be required to acquire data services, develop software, and work out paperwork flow problems. These activities fall into this category. Beginning in the third fiscal year, however, the basic system should be established. Systems changes, contract renegotiation, etc., occurring in the third fiscal year or later will be classed as "Data Processing" activities. LTC and ambulatory care development and processing activities fall into number 18 and 19, as appropriate.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

10. DATA PROCESSING

Includes all entry, processing, and output activities. Also includes all contract negotiation and systems changes activities occurring after the second fiscal year. LTC and ambulatory care systems costs should be classified in their respective lines, i.e., 18 and 19.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

11. REFINE PSRO REVIEW PLAN AND COMPLETE PILOT TESTING

Activities in this category begin when the PSRO starts work on pilot testing (if done) of the CR and MCE systems. When full-scale implementation is initiated for all hospitals, activities fall into numbers 12 and 13, as appropriate.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

12. IMPLEMENT CR PLANS

a. Training

Activities in this category begin when systems implementation is initiated for all hospitals. It is not expected that all hospitals will implement the program at once. This activity begins when the decision to go ahead with a phase-in implementation program is made. Once a hospital program is ongoing, efforts under this activity classification for new staff, etc., will be accounted for in "Monitoring," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

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PSRO ACTIVITY CATEGORY WORK SHEET

12. IMPLEMENT CR PLANS

b. Hospital Assistance

Activities in this category begin when systems implementation is initiated for all hospitals. It is not expected that all hospitals will implement the program at once. This activity begins when the decision to go ahead with a phase-in implementation program is made. Once a hospital program is ongoing, efforts under this activity classification for new staff, etc., will be accounted for in "Monitoring," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

13. IMPLEMENT MCE PLANS

a. Training

Activities in this category begin when systems implementation is initiated for all hospitals. It is not expected that all hospitals will implement the program at once. This activity begins when the decision to go ahead with a phase-in implementation program is made. Once a hospital program is ongoing, efforts under this activity classification for new staff, etc., will be accounted for in "Monitoring," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

13. IMPLEMENT MCE PLANS

b. Hospital Assistance

Activities in this category begin when systems implementation is initiated for all hospitals. It is not expected that all hospitals will implement the program at once. This activity begins when the decision to go ahead with a phase-in implementation program is made. Once a hospital program is ongoing, efforts under this activity classification for new staff, etc., will be accounted for in "Monitoring," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

14. ONGOING CRITERIA DEVELOPMENT

All criteria development activity after the manual is published should be included. However, if a special effort is undertaken to develop a specific criteria manual for nurses or other professionals, this would fall under criteria development. Criteria development for LTC and ambulatory care programs fall into 18 and 19.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

15. MANAGE, MONITOR, AND EVALUATE DELEGATED AND NONDELEGATED REVIEW

All PSRO activity intended to assure the quality of delegated review should be included in this category. Renegotiation of MOU's with hospitals will also fall in this category.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

PSRO ACTIVITY CATEGORY WORK SHEET

16. AREAWIDE MCE'S

Activities required of the PSRO staff for the development, coordination, operation, and follow-up of MCE's in two or more hospitals should be included here.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

17. NON- AND PARTIALLY DELEGATED REVIEW

Activities required to complete nondelegated and partially delegated review are included here. Some breakout of the extent of activity for each task would be helpful.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

PSRO ACTIVITY CATEGORY WORK SHEET

18. LTC REVIEW

For the present, all activities associated with long-term care (LTC) review program, whether developmental or operating, will be included here.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

PSRO ACTIVITY CATEGORY WORK SHEET

19. AMBULATORY CARE REVIEW

For the present, all activities associated with ambulatory care review programs, whether developmental or operating, will be included here.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

PSRO ACTIVITY CATEGORY WORK SHEET

20. ACTIVITIES FOCUSED ON NON-FEDERAL PATIENTS

Some PSRO's are reviewing non-federal patients. The tasks in support of these activities should be documented here. In addition to the tasks completed, a brief note on how the program developed would be helpful.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

III. ALLOCATION OF PSRO EXPENDITURES TO THE ACTIVITIES AND EXIT INTERVIEW

BACKGROUND

Once each activity category has been defined in Section II, the Macro team and knowledgeable PSRO officials will allocate expenditures to the activity categories. Cost allocation can best be completed in a conference session with individuals who are familiar with the activities of the PSRO from its inception. Using the activity category descriptions developed in Section II and the "Work Sheet for Determining PSRO Activity Costs" (see Exhibit IV, following page III-4), the allocation can be completed in a straightforward manner for each fiscal year.

All PSRO's will have cost information identified on a line-item basis (e.g., supplies, space, personnel by type, etc., are generally line items). However, our objective is to allocate an appropriate amount of each line item to the activities categories, i.e., the "activity categories" define cost centers. The Work Sheet for Determining PSRO Activity Costs has been designed to make it easy to complete this allocation doing one fiscal year at a time. In some cases, PSRO's may already have some activity cost centers as opposed to just line item cost reports. These cannot be used directly in the cost allocation unless the cost center covers exactly those PSRO tasks described in the relevant activity category in the narrative from Section II.

After Exhibit IV has been completed for each fiscal year, the Macro staff will take time to review all information collected to make sure that it is complete and to identify any clarifications needed. With this complete, the project team will give final briefing to the PSRO executive director (or designated contact person) before the team departs. During this meeting:

- Missing information and points requiring clarification will be dealt with.

- The general nature of our findings should be reviewed. A photostatic copy of the description of activities will also be presented to the PSRO staff.

- The PSRO staff will be thanked for their cooperation.

Post-site activity will include the provision of a thank you letter to the executive director of the PSRO.

QUESTIONS

1. COMPLETION OF WORK SHEET FOR DETERMINING PSRO ACTIVITY COSTS

(1) PSRO Staff Completing Work Sheet

Name	Title	Place The Activity Category Number Next To The Person Allocating Costs

(2) Work Sheet Instructions (Work Sheet is Exhibit IV, following page III-4)

Step 1--The fiscal year should be noted in the upper left corner of the work sheet. Make sure all activity costs computed on each work sheet are limited to funds spent in that particular fiscal year. A new work sheet should be used during each fiscal year.

Step 2--Each PSRO employee, staff type, or other resource should be listed under the column so named (i.e., left-most column). This information should be taken from the line item cost summary for the PSRO.

Step 3--The annual salary cost (including fringe) or the annual resource cost should be placed in the next column to match the employee's name, staff type, or resource. Again, this information should be taken from the PSRO budget.

Step 4--Working with the PSRO officials who identified the PSRO activities in Step 3, estimate the percentage of staff time or other resources for each activity in the fiscal year. Time estimates need only be developed for each activity category and do not need to be developed for individual PSRO tasks. Once the activity percentage of time is determined, the actual dollar allocation can be computed as follows:

(Annual Dollar Total From Column 2) X (Estimated Percentage of Staff or Resource Time Committed to Activity Category) = (Activity Dollar Allocation)

Record the Activity Dollar Allocation in the appropriate box in Exhibit IV.

Step 5--After the Activity Dollar Allocations have been developed for all employees, staff type, and resources, the columns and rows should be summed. This serves as a check to ensure that all costs were allocated to an activity. If the Total Allocated Costs in Exhibit IV does not match the PSRO fiscal year cost reports, then the exhibit should be reviewed to find the error.

Step 6--Any unusual circumstances or costs should be noted by placing a check in the right-most column. A page of comments should be attached to the work sheet referencing the page, line, and column numbers of the cost or circumstance to be noted.

Step 7--The work sheet should be completed for each fiscal year of the PSRO existence.

2. EXIT MEETING

(1) PSRO Staff Attending Exit Meeting

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

(2) Exit Meeting Agenda

- Summarize findings, present photostatic copy of the activity category descriptions, and answer any questions.
- Indicate that final typewritten copies of the findings for this PSRO will be forwarded to them in approximately 10 days.
- Thank the PSRO Director and staff for their cooperation.

EXHIBIT IV(1)

Office of Planning, Evaluation, and Legislation

WORK SHEET FOR DETERMINING
PSRO ACTIVITY CATEGORY COSTS

Fiscal Year _____, 197__ to _____, 197__

Page ____ of ____

Line Number	Name of Employee or Staff Type, or Resource	Annual Total (Including Fringe Benefits)	Develop System for CR and MCE Review In Acute Care Hospitals	Professional Relations, Initial			Professional Relations, Continuing			Initial Assessment and Baseline Data	Develop Norms, Standards, and Criteria (Cut off at manual publication)	MOU Development	Administration, Initial	
				Physicians	Hospitals	Non-physician Professionals	Physicians	Hospitals	Non-physician Professionals				Salary	Non-personnel
			1	2a	2b	2c	3a	3b	3c	4	5	6	7a	7b
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
	Total Budget													

Line Number	Administration, General			Plan and Let Data Contract	Data Processing	Refine PSRO Review Plan and Complete Pilot Testing	Implement CR Plans		Implement MCE Plans		Ongoing Criteria Development	Manage, Monitor, and Evaluate Delegated and Nondelegated Review	Areawide MCE's	Non- and Partially-Delegated Review	LTC Review	Ambulatory Care Review	Activities Focused on Nonfederal Patients	Total	Comments *
	Salary	Non-personnel	Space				Training	Hospital assistance	Training	Hospital assistance									
	8a	8b	8c	9	10	11	12a	12b	13a	13b	14	15	16	17	18	19	20		
1																			
2																			
3																			
4																			
5																			
6																			
7																			
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21																			
22																			
23																			
24																			
T																			

Note: * Where comment is required or desired, check "Comments" column and append notes to page, referending page, line, and column number.

IV. POST SITE VISIT TASKS: SUMMARY SHEET, EVALUATION, AND THANK-YOU LETTER

BACKGROUND

There are four post-site tasks that must be performed by the Macro site team, including:

- Exhibit V, Summary of PSRO Expenditures by Activity Category (cost), following page IV-3, and Exhibit VI, Summary of PSRO Expenditures by Activity Category (percentages), following Exhibit V, must be completed.
- Interviewer impressions regarding the accuracy of the data will be documented.
- The interview guide must be finalized and submitted to the project manager.
- A thank-you letter will be sent to the PSRO contact person, enclosing copies of the final typewritten information collected on site.

Each of the above post-site tasks will be described in this section. The first three of the above tasks should be completed within two days of the end of the PSRO visit. The letter will go out within 10 days. The completed interview guide should be reviewed carefully for completeness and accuracy before submission to the project manager. The information will be typed and submitted both to OPEL as part of the final report and to the PSRO with the thank you letter.

QUESTIONS

1. COMPLETE THE SUMMARY OF PSRO EXPENDITURES BY ACTIVITY CATEGORY (See Exhibit V, following page IV-3)

Transcribe entries from the bottom of Exhibit IV for each fiscal year (completed in Section III) directly onto Exhibit V. The activity columns sum vertically to identify start-up and operating costs. Comment sheets, if any, from the Work Sheets, i.e., Exhibit IV, should be copied and attached to Exhibit V. Please double check all totals between Exhibits IV and V.

2. COMPLETE THE PERCENTAGE SUMMARY OF PSRO EXPENDITURES BY ACTIVITY CATEGORY

Complete the percentages in Exhibit VI, following Exhibit V, based on the dollar figures in Exhibit V.

3. EVALUATE THE DATA COLLECTED

(1) What were the greatest problems in determining the PSRO activities?_____

_____

_____

_____

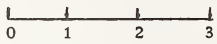
(2) What were the greatest problems in allocating costs to the activities?_____

_____

_____

_____

(3) Everything considered, what level of confidence do you have in the activity descriptions? (Place X on number line)_____



0 - The activity descriptions are of limited value and do not reflect actual activity.
1 - The activity descriptions data are questionable, although they do give a general idea of PSRO activity.
2 - The descriptions provide a solid idea of PSRO activity.
3 - The descriptions of activities are extremely accurate.

(4) Additional comments regarding the accuracy of the descriptions of the PSRO activity._____

_____

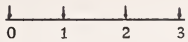
_____

_____

_____

_____

(5) Everything considered, what level of confidence do you have in the cost data? (Place X on the number line)



0 - The data are of limited value.

1 - The data indicate a general distribution of costs, but specific data are questionable.
2 - The data provide a reasonable or solid idea of the real cost by activity category.
3 - The cost data probably could not be much more accurate even if time sheets were available.

(6) Additional comments regarding the accuracy of the cost data. _____

_____

_____

_____

4. INTERVIEW GUIDE SUBMITTED TO PROJECT MANAGER

(1) Date Submitted _____

(2) Date Received _____

5. THANK-YOU LETTER AND ATTACHMENTS TO THE PSRO

(See Exhibit VII, following Exhibit VI, for a prototype letter.)

(1) Date Sent _____
(Attach copy)

(2) Courtesy Copies To:

☐ Project Manager

☐ OPEL Project Officer

☐ Other, identify_____

EXHIBIT V

Office of Planning, Evaluation, and Legislation

SUMMARY OF PSRO EXPENDITURES
BY ACTIVITY CATEGORY
(Cost In Thousands)

Activity Category		FY I		FY II		FY III				Check If Comments
Number of Months of Data:										
		Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	
1. Develop System for CR & MCE Review In Acute Care Hospitals										
2. Professional Relations, Initial:	a. Physicians									
	b. Hospitals									
	c. Non-physician professionals									
3. Professional Relations, Continuing:	a. Physicians									
	b. Hospitals									
	c. Non-physician professionals									
4. Initial Assessment and Baseline Data										
5. Develop Norms, Standards, & Criteria (cut off at manual pub.)										
6. MOU Development										
7. Administration, Initial:	a. Salary									
	b. Non-personnel									
8. Administration, General:	a. Salary									
	b. Non-personnel									
	c. Space									
9. Plan and Let Data Contract										
10. Data Processing										
11. Refine PSRO Review Plan and Complete Pilot Testing										
12. Implement CR Plans:	a. Training									
	b. Hospital assistance									
13. Implement MCE Plans:	a. Training									
	b. Hospital assistance									
14. Ongoing Criteria Development										
15. Manage, Monitor, & Evaluate Delegated & Nondelegated Review										
16. Areawide MCE's										
17. Non- and Partially-Delegated Review										
18. LTC Review										
19. Ambulatory Care Review										
Total Start-Up or Operating Costs										
Total Costs by Fiscal Year										
Start-Up Costs as a Percent of Total Costs										

20. Activities Focused on Nonfederal Patients										

May 9, 1977

EXHIBIT VI

Office of Planning, Evaluation, and Legislation

SUMMARY OF PSRO EXPENDITURES
BY ACTIVITY CATEGORY
(Percentages of Total Annual Expenditures)

Activity Category		Number of Months of Data:	FY I		FY II		FY III				Check If Comments
			Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	
1. Develop System for CR & MCE Review in Acute Care Hospitals											
2. Professional Relations, Initial:	a. Physicians										
	b. Hospitals										
	c. Non-physician professionals										
3. Professional Relations, Continuing:	a. Physicians										
	b. Hospitals										
	c. Non-physician professionals										
4. Initial Assessment and Baseline Data											
5. Develop Norms, Standards, & Criteria (cut off at manual pub.)											
6. MOU Development											
7. Administration, Initial:	a. Salary										
	b. Non-personnel										
8. Administration, General:	a. Salary										
	b. Non-personnel										
	c. Space										
9. Plan and Let Data Contract											
10. Data Processing											
11. Refine PSRO Review Plan and Complete Pilot Testing											
12. Implement CR Plans:	a. Training										
	b. Hospital assistance										
13. Implement MCE Plans:	a. Training										
	b. Hospital assistance										
14. Ongoing Criteria Development											
15. Manage, Monitor, & Evaluate Delegated & Nondelegated Review											
16. Areawide MCE's											
17. Non- and Partially-Delegated Review											
18. LTC Review											
19. Ambulatory Care Review											
Total Start-Up or Operating Costs											
Total Costs by Fiscal Year											
Start-Up Costs as a Percent of Total Costs											

20. Activities Focused on Nonfederal Patients								

May 9, 1977

(HSA Letterhead)

PSRO SITE VISIT THANK-YOU LETTER

-Date-

Mr. John Smith
Executive Director
Smithfield Medical Foundation
2426 Trout Circle
Smithfield, Illinois

Dear _____:

On behalf of the Office of Planning, Evaluation, and Legislation (OPEL); Health Services Administration (HSA); the Bureau of Quality Assurance (BQA); and Macro Systems, Inc. (MSI), we wish to thank you for assisting us with the allocation of your PSRO costs to specific activity areas and the development of supporting descriptive material. Our sessions at _____ PSRO were highly productive and will contribute substantially to the overall goal of developing estimates of national costs of PSRO activity.

Enclosed you will find the typed final products of our visit to your PSRO.

(Insert anecdotal line, if appropriate)

It was most enjoyable working with you. Thank you again for your cooperation.

Sincerely,

Dr. Ron Carlson
Deputy Associate Administrator

Office of Planning, Evaluation,
and Legislation

cc: OPEL, Project Officer
MACRO Project Manager

May 9, 1977

APPENDIX E

INTERVIEW GUIDE FOR THE PSRO LEVEL EXPENDITURE ALLOCATION STUDY

(Predominantly Nondelegated Areas)

PSRO Number	_____
PSRO Contact Person	_____
PSRO Name	_____
PSRO Telephone Number	_____
Macro Field Staff	_____
Submitted to:	_____
Date Submitted:	_____

May 9, 1977

i. INTRODUCTION TO THE NONDELEGATED PSRO INTERVIEW GUIDE

This interview guide is designed to assist Macro site visit teams in working with Professional Standards Review Organization (PSRO) staff to allocate PSRO expenditures to various activity cost centers. In addition, a special section is included directing the site team in the identification of the specific, step-by-step review process used in the PSRO's nondelegated hospitals. It takes approximately two days on site to gather the information to complete this interview guide. The purpose of the interview guide is to ensure that the site visit teams use a uniform approach to data acquisition at each PSRO. Thus, the guide provides detailed instruction from the initiation to the completion of all PSRO contact to assure that all needed information is developed correctly in the shortest time possible.

The guide is broken into an introduction and six sequential sections:

- i. Introduction to the interview guide
- ii. Pre-site visit tasks: initial contact and confirmation letter
- I. Initial meeting with the PSRO: summary of study objectives and overview of PSRO development
- II. Development of descriptions of PSRO activities
- IIA. Flowcharting of in-hospital review activities
- III. Allocation of PSRO expenditures to the activities and exit interview
- IV. Post-site visit tasks: summary sheet, evaluation, and thank-you letter

Within each section, there are two subsections: "Background" and "Questions and Instructions." The "Background" subsections describe the interview process, provide perspectives as to how the section fits with the overall interview, and give some insight into areas of sensitivity that may be encountered. The "Questions and Instructions" subsections provide a list of the questions that must be answered and give detailed instruction when necessary. All information needed for completion of the interview guide is contained in this document. Space is provided for comments at various points throughout the interview guide so that even anecdotal information may be systematically documented.

Sections i, ii, and IV will be completed off site. Sections I, II, and III will be completed while working with PSRO staff on site.

ii. PRE-SITE VISIT TASKS: INITIAL CONTACT AND CONFIRMATION LETTER

BACKGROUND

During initial communications with PSRO officials, project team members must be sensitive to the concerns of the PSRO staff. For instance:

- Interest in the way a PSRO has utilized its funds is likely to be viewed with great concern
- The many unresolved policy issues surrounding PSRO operations have caused considerable strain in the relations between the various levels of government concerned
- PSRO's receive many time-consuming information requests from representatives of all levels of government

To minimize PSRO anxieties, the project team will pay particular attention to precision and economy in our communications with all PSRO officials. The questions in this section of the interview guide have been designed to limit slippage and errors by detailing all activities required and providing a form for documentation of each step as it is completed.

The section begins with the documentation of the initial PSRO contact, as provided to the Macro project manager by OPEL. (OPEL will make preliminary contacts with the PSRO's to assure their cooperation and may make tentative arrangements before turning the information over to Macro.) The site team leader responsible for data collection at a specific PSRO, will then telephone the PSRO and finalize the date and time of the site visit.

During the initial Macro telephone call to the PSRO, the site team leader will:

- Briefly explain the nature of the study using the outline shown below in "Questions and Instructions" and explain the time commitment PSRO staff need to make (the limit is two days because we will be on site only two days)

- Inform the PSRO that all information gathered will be kept confidential

- Identify a firm appointment for the site visit

- Ask the PSRO contact to recommend a hotel/motel (this can save us considerable time and expense)

- Confirm with the PSRO their mailing and street address

- Assess the extent of the PSRO's interest, cooperation, or concern regarding the study and document problem areas for pre-site briefing on sensitive areas

A letter confirming the site visit arrangements will be sent to the PSRO as soon as possible after the initial Macro telephone call (includes cc's to the OPEL project leader and the Macro project manager). A prototype confirmation letter appears in Exhibit ii-I, following "Questions and Instructions."

PSRO No._____

QUESTIONS AND INSTRUCTIONS

1. OPEL PSRO CONTACT (Supplied by OPEL)

(1) PSRO Name:_____

(2) Person Contacted:_____ Phone: (___)_____

(3) Title:_____

(4) PSRO Mailing Address:_____

_____

_____

(5) PSRO Street Address (If different from mailing):_____

_____

_____

(6) Name of OPEL Staff member who contacted PSRO:_____

Date of contact:_____

(7) Tentative site visit arrangements (If any):_____

_____

(8) Comments by OPEL:_____

_____

_____

_____

2. MACRO INITIAL PSRO CONTACT

Complete during conversation

(1) Person(s) Contacted	Title	Telephone	Date

(2) Points To Be Covered During Initial Telephone Contact

a. This is _____ of Macro Systems, Inc., calling to discuss with you your participation in a Health Services Administration Study of PSRO costs.

b. _____ spoke with you about this study on _____.
OPEL staff contact shown in 1.(6) above (date of contact)

c. The purpose of this study is to determine:

- PSRO level costs and activities in nine PSRO areas throughout the country.
- In-hospital PSRO review costs in six PSRO areas throughout the country. From six to fourteen hospitals will be interviewed in each PSRO area, depending on the total number of hospitals in an area.
- In-hospital pre-PSRO review costs in three non-PSRO areas. Fourteen hospitals will be interviewed in each of these areas.

(Section I Study Objectives provides more detail on these points.)

d. Your PSRO was selected based upon the:

- Length of PSRO operation
- Accessibility of data for other companion studies in the area
- Geographical balance (representativeness)

e. Macro on-site activities will include working with the Executive Director, assistants who are familiar with most PSRO activities to date, and the financial staff person. It is important that all persons be present during our site visit.

f. Macro site team members and PSRO staff members will complete the following activities during the site visit:

- Develop a brief narrative about PSRO tasks in predefined activity areas
- Allocate PSRO expenditures into these activity areas from day one to the latest data available
- Collect basic statistics on the number of hospitals and the total number of reviews in the area

All cost information from individual PSRO's and activity data will be reported in such a way that the PSRO cannot be identified.

g. It is anticipated that PSRO staff need to be available for most of the two days. Macro field staff are on site to complete the allocation of costs. The product of Macro's work will be:

- A chart showing expenditures for start-up versus operating costs
- A brief narrative describing what the money was spent on in these areas

h. What day would it be most convenient to meet? We were hoping for _____ (make suggestion).

(3) Confirmed Site Visit Date

a. Date of meeting: _____ Time: _____

b. PSRO officials attending initial orientation meeting with Macro:

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

c. Building and room number: _____

d. Address (If different from above): _____

_____

e. Hotel/motel recommended: _____

Telephone (Get from Information): _____

(4) Comments And Important Items Discussed During Phone Conversation: _____

_____

Complete after conversation _____

_____

_____

(5) Comments Upon Perceived Cooperation Of PSRO:

_____Unqualified cooperation _____Qualified (Describe problems below)

_____

Complete after conversation _____

_____

_____

3. PSRO SITE VISIT CONFIRMATION LETTER (Prototype follows this page)

   a. Date letter sent:_____

   b. Courtesy copies of site visit confirmation letter sent to (Check when sent):

      ☐ Macro Project Manager

      ☐ OPEL Project Officer

PSRO SITE VISIT CONFIRMATION LETTER

-Date -

Mr. John Smith
Executive Director
Smithfield Medical Foundation
2426 Trout Circle
Smithfield, Illinois 60623

Dear Mr. Smith:

We appreciate your willingness to participate in the nationwide study Macro Systems is conducting for the Health Service Administration (HSA), Office of Planning, Evaluation, and Legislation (OPEL). This letter is to confirm our meeting at _____ on _____, 1977. At that time, we would
(Time) (Day of the week and date)
like to further review the objective of our study and the actual activities we will be engaged in while at your PSRO. Therefore, we hope that your financial staff person and chief assistants can attend this orientation meeting so that they will each understand our purpose as well as the activities planned for the two-day visit.

The objective of our visit is to allocate your expenditures into approximately 20 activity areas and to differentiate between the initial set-up costs of a PSRO program and the ongoing operational costs. To clarify the activity areas so that effective cost allocations can be made, we will work with you to develop a synopsis of tasks your PSRO has completed in each of the 20 areas since the start of your program. We will then work with you to allocate your expenditures to these activities. All written products we develop will be confidential and will appear only in either aggregate or coded form in any work submitted to the Health Services Administration.

If you have any questions, please contact me at (301) 585-6939. We look forward to meeting with you on _____, _____. Thank you very much for your cooperation.
(Day of the week, date)

Sincerely,

(Name)
Project Manager

MACRO SYSTEMS, INC.

cc: OPEL Project Officer

I. INITIAL MEETING WITH THE PSRO: STUDY OBJECTIVES AND OVERVIEW

BACKGROUND

The initial meeting with the PSRO will include the Executive Director, the Deputy or Assistant Director, the Chief Financial Officer, and other knowledgeable PSRO officials the Executive Director wishes to include in the meeting. Both members of the Macro site team will be present. The objective of the meeting will be to:

- Present the study objectives and go over the interview guide briefly so that all present will know what to expect and have the opportunity to ask questions
- Listen to a brief summary of the history and evaluation of the PSRO as presented by the staff
- Work with the PSRO staff to go over the 20 basic activity areas (see Exhibit I, following page I-5) and to develop a tentative schedule for the remainder of the on-site effort, including completion of the General PSRO Data sheet (see Exhibit II, following "Questions and Instructions")
- Identify important demographic information to be used to develop a general description of the PSRO. Several hypotheses concerning possible relationships between PSRO's and their respective costs will be tested using demographic information.

Clarification of study objectives will facilitate the rapid transfer of knowledge from PSRO to Macro staff, saving time for all of us. It will also help establish rapport and reduce any anxieties the PSRO may have regarding who we are and what we are really doing.

Finally, once the PSRO staff understands the nature of our informational needs and we have a basic overview of PSRO activities, we can work with the staff to schedule the rest of the on-site work. Generally, group meetings are preferable to individual interviews because PSRO staff can provide immediate feedback to one another and rapidly reach consensus on key PSRO tasks. However, if the PSRO officials would like separate interviews, the Macro team will develop a tentative appointment schedule for individual interviews. When the initial meeting is complete, a short break may be suggested before plunging into Section II.

QUESTIONS AND INSTRUCTIONS

1. OPEN THE MEETING BY INTRODUCING THE STUDY TEAM AND MAKING INTRODUCTIONS AROUND THE ROOM. Send an attendance sheet around to identify the attendees as follows:

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2. DISCUSS THE STUDY OBJECTIVES AND FIELD QUESTIONS

The objective of this part of the PSRO cost evaluation study is to identify the cost of setting up and operating your PSRO. Nondelegated review costs are included as PSRO level costs; however, delegated review costs will be excluded. More specifically:

- Set-Up Costs Must Be Identified--The nonrecurring costs of setting up a PSRO must be identified and included as PSRO level costs. Examples of these costs include finding and furnishing space, planning and testing programs, developing standards and criteria, implementing programs, and acquiring data services.

- Ongoing Operating Costs Must Be Identified--The annual recurring costs of PSRO operations must be assessed. Examples of these costs include program monitoring, program evaluation, data processing costs, criteria review, and nondelegated review costs.

- Delegated Review Costs Are Assessed In A Separate Related Part Of The Study--The In-Hospital Review Cost Identification Guidelines are used to determine delegated PSRO costs.

The differentiation between these types of costs is important to the overall PSRO evaluation strategy because the Department of Health, Education, and Welfare (HEW) must know with greater specificity how much it costs to set up a PSRO and, once established, how much it costs to operate one.

PSRO setup costs are expected to go down over time because new organizations will be able to adapt and refine programs developed by current PSRO's, with consequent setup cost savings to HEW. At the same time, as more and more PSRO's achieve a stable operating level, the Federal government will have to support their continued operation. Expected operating costs are not known at this time, so it is difficult to estimate the level of financial commitment required or to evaluate the cost effectiveness of the PSRO program.

3. PSRO STAFF PRESENTS BRIEFING ON PROGRAM DEVELOPMENT

Interviewer documents key points below. Attach any handouts to the interviewer guide, with explanations as needed.

a. Fiscal year begins:_____ Ends:_____

b. Date PSRO began:_____

c. Date foundation activity began, if related:_____

d. Brief history and comments on PSRO development

4. DISCUSS THE TWENTY ACTIVITY CATEGORIES AND IDENTIFY THE PSRO PERSONNEL MOST KNOWLEDGEABLE ABOUT EACH AREA

Pass out Exhibit I, following this page, and discuss the relationships between the categories.

5. DEVELOP TENTATIVE SCHEDULE FOR REMAINDER OF SITE VISIT

a. Complete Exhibit II, following Exhibit I. The data identified will be used for analytical purposes such as showing the types of activities that were occurring during the three years of PSRO operation. In certain cases (e.g., number of nonfederal admissions and discharges, or number of nonfederal reviews), the PSRO may not have data. If not, work with the PSRO official providing the data to develop the best reasonable estimate. Be sure to document the origin of the number in comments.

b. Schedule for all other appointments:

Name(s)	Title	Topic	Time and Place

PSRO ACTIVITY CATEGORIES

1. Develop System for CR and MCE Review in Acute Care Hospitals
2. Professional Relations, Initial:
   a. Physicians
   b. Hospitals
   c. Nonphysician professionals
3. Professional Relations, Continuing:
   a. Physicians
   b. Hospitals
   c. Nonphysician professionals
4. Initial Assessment and Baseline Data
5. Develop Norms, Standards, and Criteria (Cut Off at Manual Publication)
6. MOU Development
7. Administration, Initial:
   a. Salary
   b. Nonpersonnel
8. Administration, Continuing:
   a. Salary
   b. Nonpersonnel
   c. Space
9. Plan and Let Data Contract
10. Data Processing
11. Refine PSRO Review Plan and Complete Pilot Testing
12. Implement CR Plans:
    a. Training
    b. Hospital assistance
13. Implement MCE Plans
    a. Training
    b. Hospital assistance
14. Ongoing Criteria Development
15. Manage, Monitor, and Evaluate Delegated and Nondelegated Review (MCE's and CR)
16. Areawide MCE's
17. Non- and Partially Delegated Review
18. LTC Review
19. Ambulatory Care Review
20. Activities focused on nonfederal patients

EXHIBIT II

GENERAL PSRO DATA OVER
THREE FISCAL YEARS

PSRO No. _____

	FY I			FY II			FY III			
	Delegated	Non- or Partially Delegated	No PSRO Review	Delegated	Non- or Partially Delegated	No PSRO Review	Delegated	Non- or Partially Delegated	No PSRO Review	Comments
1. No. of hospitals in PSRO area										
2. Not fully delegated but doing delegated:										
a. CR										
b. MCE's										
3. Number of discharges:										
a. Federal										
b. Nonfederal										
4. Number of admissions:										
a. Federal										
b. Nonfederal										
5. Number patients reviewed:										
a. Federal										
b. Nonfederal										
6. Number of review coordinator reviews:										
a. Federal										
7. Number of referrals to review physician:										
a. Federal										
b. Nonfederal										

Title of person providing data: _____

☐ From PSRO records; ☐ From individual hospital data _____

☐ Other, explain _____

May 9, 1977

II. DEVELOPMENT OF DESCRIPTIONS OF PSRO ACTIVITIES

BACKGROUND

The purpose of this section is to describe the major activities that the PSRO has completed since its inception. In order to do this, the tasks that the PSRO has carried out will be classified into 20 more general activity categories which were developed as a result of previous Macro field work (See Exhibit I, following page I-5, for a complete list of the activities). The ultimate objective of this section is to describe, and thereby define, the tasks supporting each activity category so that in Section III we will be able to assign all PSRO expenditures to one of the categories. In other words, the activity categories will become cost centers. However, before costs may be allocated, we must adequately describe each activity category in terms of the specific tasks that each PSRO has completed, or is in the process of completing, to carry out its responsibilities.

The development of activity category descriptions may best be completed by meeting with the PSRO Executive Director, the Chief Financial Officer, and other top assistants knowledgeable about PSRO's activities from its beginning. PSRO's are expected to have completed different tasks in each activity area, so individuals familiar with the PSRO's development will be our primary resource. The Macro team must elicit each task from the PSRO officials, discuss it to make sure it is understood, and place it in the appropriate activity category. Also, because no hospitals will be visited in this predominantly nondelegated PSRO, a PSRO review coordinator must be interviewed to flowchart the step-by-step review processes (see Section IIA).

This section provides background and two exhibits designed to make it possible to complete the activities description portion of the study in minimal time. The purpose of using these forms is threefold:

- They allow classification of all PSRO activities into appropriate uniform activity categories for all PSRO's. For the purposes of this interview guide, PSRO activities may be described as those tasks the PSRO has engaged in or accomplished to date. Each activity identified at a PSRO can be classified in one of the activity categories because they were designed to encompass the universe of possible PSRO activities. The activity categories will serve as cost centers in allocating PSRO costs (see the comprehensive list of categories in Exhibit I). The difference between what is meant by PSRO activity and the activity category can be illustrated as follows. Mailing invitations to physicians to join the PSRO is a typical PSRO activity. This activity would be classified within the "professional relations - initial, a. physicians" activity category (see PSRO Activity Categories - Exhibit I).

- Their use helps define precisely, in the PSRO's own terms, what tasks are included in each activity category so that this will be clear when PSRO expenditures are allocated to the activity categories in Section III.

- They help identify different PSRO implementation and operational approaches useful in understanding what actually occurs at the PSRO level.

The site team approach will be flexible in developing the narrative descriptions of PSRO activity. However, it is generally preferable to work in groups of several knowledgeable PSRO staff persons (e.g., the Executive Director, Assistant Director). This allows an interplay between two or more persons' memories, resulting in rapid completion of the tasks due to the possibility for immediate feedback and discussion. Whether the information is developed in small groups or in individual interviews, the same basic approach will be taken. Each PSRO staff member will be briefed upon initial contact about:

- The purpose of the study

- How the narrative descriptions of PSRO activities fit into the cost allocation strategy

During the individual or group interviews, the Macro team should give copies of Exhibit I, PSRO Activity Categories, to all PSRO staff members present. It should be explained that all PSRO activities to date will be classified in the activity categories list. At this point in the interview, the PSRO staff should be given time to review the activity categories list. After reviewing Exhibit I, the Macro team and the PSRO staff members will discuss each activity category. The Macro site visit team will explain each activity category, taking care not to lead the PSRO staff by suggesting things they might have done. If a PSRO staff member does not feel knowledgeable about discussing an activity category, then identify another PSRO staff person(s) who is more knowledgeable about the activity category and speak to him or her.

The product of our effort will be the development of data points describing PSRO tasks in each activity category documented on the work sheets in Exhibit III, PSRO Activity Category Work Sheet. Exhibit III consists of a work sheet for each activity category listed in Exhibit I. Each Activity Work Sheet includes explanations or definitions to assist Macro and PSRO staff in identifying which activity category a particular PSRO task should be assigned to. The activity categories are listed in roughly chronological order; i.e., the first listed activities are likely to be completed early in the PSRO's development and activities lower on the list were probably completed later in PSRO development. As PSRO staffers identify different activities completed, Macro will discuss and clarify them in appropriate categories and document them on the activity work sheets.

As soon as possible after completion of the work sheets, the Macro team should edit in "dot point" the major PSRO activities documented under each activity category so that all will be concisely summarized. The summary of PSRO activities must be developed as a final product for typing at Macro. However, its most immediate and important use will be on-site for defining what is included in each activity category for use in PSRO expenditure allocation in Section III, following this section.

QUESTIONS AND INSTRUCTIONS

1. Using Exhibit I from Section I to make sure the PSRO staff remembers the relationship between the categories, complete Exhibit III. Discuss and begin documenting tasks on the appropriate work sheets. Generally, completing the work sheets in the order provided is the most effective. However, moving back and forth from category to category, as PSRO officials remember new details, is essential.

PSRO ACTIVITY CATEGORY WORK SHEET

1. DEVELOP SYSTEM FOR CR AND MCE REVIEW IN ACUTE CARE HOSPITALS

List activities in chronological order or developmental sequence where possible. MCE development activity is usually very limited. Describe MCE development activity separately from CR development. Where work is being completed on review systems for long-term or ambulatory care, the activities should be classified on Sheets 18 and 19, as appropriate.

Activity category numbers 1, 11, 12, and 13 are related. The relationship is:

- Number 11 begins after initial system is developed for CR and MCE review in acute care hospitals.
- Number 11, Refine PSRO Review Plan and Complete Pilot Testing, may be skipped in favor of immediate implementation of the CR and MCE systems (Numbers 12 and 13).

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

2. PROFESSIONAL RELATIONS - INITIAL

a. Physicians

Initial professional relations include all activities that the PSRO feels were performed to develop contacts and establish basic relationships for PSRO operation. If a special new project must be launched by the PSRO to deal with a new problem in a group with whom PSRO relations have already been established, this should be classified as a "continuing" activity. However, when special campaigns must be undertaken by the PSRO to relate to a new group regarding the implementation of reviews in long-term or ambulatory settings, the activities will be classified as "initial" (for the present, all LTC and ambulatory activities should be shown in 18 and 19 respectively.).

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

2. PROFESSIONAL RELATIONS - INITIAL

b. Hospitals

Initial professional relations include all activities that the PSRO feels were performed to develop contacts and establish basic relationships for PSRO operation. If a special new project must be launched by the PSRO to deal with a new problem in a group with whom PSRO relations have already been established, this should be classified as a "continuing" activity. However, when special campaigns must be undertaken by the PSRO to relate to a new group regarding the implementation of reviews in long-term or ambulatory settings, the activities will be classified as "initial" (for the present, all LTC and ambulatory activities should be shown in line 18 and 19 respectively).

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

2. PROFESSIONAL RELATIONS - INITIAL

c. Nonphysician Professionals

Initial professional relations include all activities that the PSRO feels were performed to develop contacts and establish basic relationships for PSRO operation. If a special new project must be launched by the PSRO to deal with a new problem in a group with whom PSRO relations have already been established, this should be classified as a "continuing" activity. However, when special campaigns must be undertaken by the PSRO to relate to a new group regarding the implementation of reviews in long-term or ambulatory settings, the activities will be classified as "initial" (for the present, all LTC and ambulatory activities should be shown in line 18 and 19 respectively).

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

3. PROFESSIONAL RELATIONS - CONTINUING

a. Physician

At some point the PSRO will feel that professional relations have basically been established. At that time, professional relations activities shift to a more steady month-by-month (or quarter-by-quarter) routine. These are continuing, as opposed to initial, activities. If a special new project is launched in response to specific problems well into the history of the PSRO after the continuing level has been achieved, they should be classed as "continuing." However, when special campaigns must be undertaken to relate to a new group regarding the implementation of review in long-term or ambulatory settings, these activities will be classed as "initial." For the present, all LTC and ambulatory activities should be shown in 18 and 19, respectively.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

3. PROFESSIONAL RELATIONS - CONTINUING

b. Hospitals

At some point the PSRO will feel that professional relations have basically been established. At that time, professional relations activities shift to a more steady month-by-month (or quarter-by-quarter) routine. These are continuing, as opposed to initial, activities. If a special new project is launched in response to specific problems well into the history of the PSRO after the continuing level has been achieved, they should be classed as "continuing." However, when special campaigns must be undertaken to relate to a new group regarding the implementation of review in long-term or ambulatory settings, these activities will be classed as "initial." For the present, all LTC and ambulatory activities should be shown in 18 and 19, respectively.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

3. PROFESSIONAL RELATIONS - CONTINUING

c. Nonphysician professionals

At some point the PSRO will feel that professional relations have basically been established. At that time, professional relations activities shift to a more steady month-by-month (or quarter-by-quarter) routine. These are continuing, as opposed to initial, activities. If a special new project is launched in response to specific problems well into the history of the PSRO after the continuing level has been achieved, they should be classed as "continuing." However, when special campaigns must be undertaken to relate to a new group regarding the implementation of review in long-term or ambulatory settings, these activities will be classed as "initial." For the present, all LTC and ambulatory activities should be shown in 18 and 19, respectively.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

4. INITIAL ASSESSMENT AND BASELINE DATA

This includes both the assessment of provider facilities to determine whether or not they should be delegated and the identification of baseline utilization data for the area.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

5. DEVELOP NORMS, STANDARDS, AND CRITERIA

The developmental effort ends with the publication of the First Screening Criteria Manual. Further activity will go into "Ongoing Criteria Development;"(see number 14). LTC and ambulatory care criteria development go in 18 and 19, respectively.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

6. MEMORANDUM OF UNDERSTANDING (MOU) DEVELOPMENT

Initial MOU development and negotiation falls in this category. If MOU's are renegotiated after the first year or when a new institution opens requiring the development of a new MOU, this activity shall be part of "Monitor and Evaluate Delegated Review," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

PSRO ACTIVITY CATEGORY WORK SHEET

7. GENERAL ADMINISTRATION - INITIAL

a. Salary

All activities of a nonrecurring nature not fitting into other categories but required to set up the PSRO should be classified under this category. However, once the PSRO has been established, costs for expansion or relocation will fall into Administration - General, number 8. Generally, the PSRO will be assumed to be established by the beginning of the second fiscal year.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

7. GENERAL ADMINISTRATION - INITIAL

b. Nonpersonnel

All activities of a nonrecurring nature not fitting into other categories but required to set up the PSRO should be classified under this category. However, once the PSRO has been established, costs for expansion or relocation will fall into Administration - General, number 8. Generally, the PSRO will be assumed to be established by the beginning of the second fiscal year.

Source of Infonnation: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

8. ADMINISTRATION - CONTINUING

a. Salary

Recurring activities that do not fall into other categories should be classified in this category. As noted in 7 above, once the PSRO has been established, costs for expansion, new furniture acquisition, or relocation will be classified in this category.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

8. ADMINISTRATION - CONTINUING

b. Nonpersonnel (except space)

Recurring activities that do not fall into other categories should be classified in this category. As noted in 7 above, once the PSRO has been established, costs for expansion, new furniture acquisition, or relocation will be classified in this category.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

8. ADMINISTRATION - CONTINUING

c. Space

Recurring activities that do not fall into other categories should be classified in this category. As noted in 7 above, once the PSRO has been established, costs for expansion, new furniture acquisition, or relocation will be classified in this category.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

PSRO ACTIVITY CATEGORY WORK SHEET

9. PLAN AND LET DATA CONTRACT

During the first two fiscal years, substantial effort may be required to acquire data services, develop software, and work out paperwork flow problems. These activities fall into this category. Beginning in the third fiscal year, however, the basic system should be established. Systems changes, contract renegotiation, etc., occurring in the third fiscal year or later will be classed as "Data Processing" activities. LTC and ambulatory care development and processing activities fall into number 18 and 19, as appropriate.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

10. DATA PROCESSING

Includes all entry, processing, and output activities. Also includes all contract negotiation and systems changes activities occurring after the second fiscal year. LTC and ambulatory care systems costs should be classified in their respective lines, i.e., 18 and 19.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

PSRO ACTIVITY CATEGORY WORK SHEET

11. REFINE PSRO REVIEW PLAN AND COMPLETE PILOT TESTING

Activities in this category begin when the PSRO starts work on pilot testing (if done) of the CR and MCE systems. When full-scale implementation is initiated for all hospitals, activities fall into numbers 12 and 13, as appropriate.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

12. IMPLEMENT CR PLANS

a. Training

Activities in this category begin when systems implementation is initiated for all hospitals. It is not expected that all hospitals will implement the program at once. This activity begins when the decision to go ahead with a phase-in implementation program is made. Once a hospital program is ongoing, efforts under this activity classification for new staff, etc., will be accounted for in "Monitoring," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

12. IMPLEMENT CR PLANS

b. Hospital Assistance

Activities in this category begin when systems implementation is initiated for all hospitals. It is not expected that all hospitals will implement the program at once. This activity begins when the decision to go ahead with a phase-in implementation program is made. Once a hospital program is ongoing, efforts under this activity classification for new staff, etc., will be accounted for in "Monitoring," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

13. IMPLEMENT MCE PLANS

a. Training

Activities in this category begin when systems implementation is initiated for all hospitals. It is not expected that all hospitals will implement the program at once. This activity begins when the decision to go ahead with a phase-in implementation program is made. Once a hospital program is ongoing, efforts under this activity classification for new staff, etc., will be accounted for in "Monitoring," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

13. IMPLEMENT MCE PLANS

b. Hospital Assistance

Activities in this category begin when systems implementation is initiated for all hospitals. It is not expected that all hospitals will implement the program at once. This activity begins when the decision to go ahead with a phase-in implementation program is made. Once a hospital program is ongoing, efforts under this activity classification for new staff, etc., will be accounted for in "Monitoring," number 15.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

14. ONGOING CRITERIA DEVELOPMENT

All criteria development activity after the manual is published should be included. However, if a special effort is undertaken to develop a specific criteria manual for nurses or other professionals, this would fall under criteria development. Criteria development for LTC and ambulatory care programs fall into 18 and 19.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

15. MANAGE, MONITOR, AND EVALUATE DELEGATED AND NONDELEGATED REVIEW

All PSRO activity intended to assure the quality of delegated review should be included in this category. Renegotiation of MOU's with hospitals will also fall in this category.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

PSRO ACTIVITY CATEGORY WORK SHEET

16. AREAWIDE MCE'S

Activities required of the PSRO staff for the development, coordination, operation, and follow-up of MCE's in two or more hospitals should be included here.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

17. NON- AND PARTIALLY DELEGATED REVIEW

Activities required to complete nondelegated and partially delegated review are included here. Some breakout of the extent of activity for each task would be helpful.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

18. LTC REVIEW

For the present, all activities associated with long-term care (LTC) review program, whether developmental or operating, will be included here.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

PSRO ACTIVITY CATEGORY WORK SHEET

19. AMBULATORY CARE REVIEW

For the present, all activities associated with ambulatory care review programs, whether developmental or operating, will be included here.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

PSRO ACTIVITY CATEGORY WORK SHEET

20. ACTIVITIES FOCUSED ON NONFEDERAL PATIENTS

Some PSRO's are reviewing nonfederal patients. The tasks in support of these activities should be documented here. In addition to the tasks completed, a brief note on how the program developed would be helpful.

Source of Information: Name(s)_____

Title(s)_____ PSRO No._____

May 9, 1977

IIA. FLOWCHARTING OF IN-HOSPITAL REVIEW ACTIVITIES

BACKGROUND

The purpose of this section is to detail the major steps of review by review coordinators and hospital staff. In order to do this, Macro field staff will work with PSRO review coordinators to develop flowcharts of the patient review process. Flowcharting allows detail on the review process to be developed so that different approaches used by the PSRO's studied may be identified and, if possible, models of typical approaches may be isolated.

To complete flowcharting, the PSRO review coordinator(s) will be briefed upon initial contact about:

- The purpose of the study
- How the flowcharts fit into the overall study

A general discussion of in-hospital review activities should follow. The review coordinator should be asked to describe review procedures from time of admission through all the possibilities of discharge. Similarly, if MCE's are being flowcharted, the review coordinator should describe the process of MCE from time of inception until completion and reporting of the results plus any follow-up or inquiry into the impact of the MCE. For certain activities, particularly in the General Administration category and sometimes for the UR committee, flowcharting is ineffective because activities are discrete rather than sequential. In these cases, "dot point" descriptions of activities should be developed.

QUESTIONS AND INSTRUCTIONS

It is important that you become familiar with the flowcharting specifications before you go out to the hospitals. We believe that the task of flowcharting will become far easier when you have developed a clear impression of what we expect. This section will present:

- Overall guidelines and specifications
- Step-by-step procedures
- Checkpoints

Additionally, a list of standardized abbreviations and a glossary of utilization review terminology is presented in the interviewer instructive materials provided in training.

1. OVERALL GUIDELINES AND SPECIFICATIONS (Review before the interview where flowcharting will occur)

(1) It is the patient review decision-making process you are flowcharting (as opposed to how the review coordinator spends his day, what happens to the patient chart, the patient, etc.).

(2) Include all yes/no branches in the decision-making process except the decision to discharge, which is assumed to be present at any step (do not clutter up your flowcharts unnecessarily inserting the decision to discharge where it is understood).

(3) With regard to the level of specificity desired, the following elements should be documented:

- Every specific task that represents an incremental cost of utilization review
- Every time a new form is introduced
- Every time new personnel enter the process

(4) The text within the squares on the flowcharts should be as brief as possible. Use the standardized abbreviations and eliminate any unnecessary verbage.

(5) Be sure to see if activities have occurred in each of the following areas:

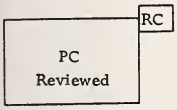
- Admissions review
- Continued stay review
- Medical care evaluation studies including:
  - Medical audits
  - Nurse audits
  - Other audits related to patient care
- Development of abstracts on patients and profiling and analysis of profiles of care
- Utilization review committee meetings and preparation for the meeting
- General administrative activity

Where flowcharting does not work, develop "dot points" describing hospital activity, if any. Whether flowcharting or dot points are used, your approach with the review personnel will be about the same.

(6) Use the following symbols when developing flowcharts:

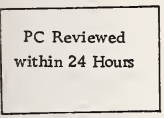
- Mark end points on your flowcharts with ovals. All branches should be either hooked back into the system or extended to a logical end point indicated with an oval.

- Where subsystems are present in the process, such as admissions review (AR), continued stay review (CSR), etc., mark them with triangles extending out on the side

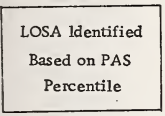


- Indicate the identity of the personnel involved in incremental tasks with the appropriate abbreviations enclosed in small squares on the upper right-hand side of the square representing the task.

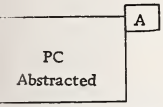
  Occasionally, tasks will occur within the process that do not represent incremental costs of review, such as "admissions data on all patients input to computer." While this task may belong on the flowchart, it is not necessary to identify the personnel involved because it is not an exclusive PSRO review-related activity.



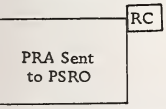
- Specify the time frames involved



- Identify any specific criteria used (and get the name and origin of any screening criteria manuals, etc.)



- Use the passive voice, past tense. Make the language as terse as possible. Eliminate any needless "state-of-being" verbs, i.e., "is," "are," etc.



- Identify all forms used

2. FLOWCHART DEVELOPMENT PROCESS

Working with an individual (or group) familiar with one of the major activity areas, develop your flowchart as follows:

Step 1--Acquire a general understanding of how the process works. Work from general to more specific questions. Ask general questions until you have acquired an overview of the utilization review process, e.g.:

"How many people are involved?"

"Where does the process start and end?"

Step 2--Begin a rough draft of the flowchart to identify the details needed. As your flowchart begins taking shape, the important details that you need to investigate will become apparent to you. Ask more specific questions, e.g.:

Starting from the beginning:

- What specific steps are involved in the process?
- Who performs each of these steps? (Get titles.)
- What does each of these tasks involve?
- How long does it take?
- What forms are used? (It is very helpful to have copies of forms used; if they are available, obtain copies.)

Step 3--Review your draft flowchart against the checkpoints below. Follow up to find any data omitted.

Checkpoints

- Walk through the steps in the flowchart. Are there any logical omissions?
- Are the personnel involved identified for all of the PSRO review tasks?
- Look at the end point on the flowcharts. Are all branches either hooked back into the system or followed through to their end points and marked with ovals?
- Does your flowchart begin and end at logical points?
- Are all forms used identified?
- Can you follow the progress of each form used from the beginning to the end of its involvement in the system?
- Are any specific criteria or standards used noted? (e.g., LOSA identified based on PAS)
- Are the time frames involved specified? (e.g., "PC reviewed within 24 hours")
- Have you used the standardized terminology and abbreviations? Are any additional abbreviations or terms used explained? If you find it necessary to incorporate any new terminology or abbreviations, please notify the project management.

3. DEVELOP "DOT POINT" DESCRIPTIVE SYNOPSES FOR PSRO REVIEW ACTIVITIES NOT AMENABLE TO FLOWCHARTING

These generally include UR committee activity and general administrative activity directly attributable to the review program but not to any specific activity.

III. ALLOCATION OF PSRO EXPENDITURES TO THE ACTIVITIES AND EXIT INTERVIEW

BACKGROUND

Once each activity category has been defined in Section II, the Macro team and knowledgeable PSRO officials will allocate expenditures to the activity categories. Cost allocation can best be completed in a conference session with individuals who are familiar with the activities of the PSRO from its inception. Using the activity category descriptions developed in Section II and the "Work Sheet for Determining PSRO Activity Costs" (see Exhibit IV, following page III-4), the allocation can be completed in a straightforward manner for each fiscal year.

All PSRO's will have cost information identified on a line-item basis (e.g., supplies, space, personnel by type, etc., are generally line items). However, our objective is to allocate an appropriate amount of each line item to the activities categories, i.e., the "activity categories" define cost centers. The Work Sheet for Determining PSRO Activity Costs has been designed to make it easy to complete this allocation doing one fiscal year at a time. In some cases, PSRO's may already have some activity cost centers as opposed to just line item cost reports. These cannot be used directly in the cost allocation unless the cost center covers exactly those PSRO tasks described in the relevant activity category in the narrative from Section II.

After Exhibit IV has been completed for each fiscal year, the Macro staff will take time to review all information collected to make sure that it is complete and to identify any clarifications needed. With this complete, the project team will give final briefing to the PSRO executive director (or designated contact person) before the team departs. During this meeting:

- Missing information and points requiring clarification will be dealt with.

- The general nature of our findings should be reviewed. A photostatic copy of the description of activities will also be presented to the PSRO staff.

- The PSRO staff will be thanked for their cooperation.

Post-site activity will include the provision of a thank you letter to the executive director of the PSRO.

QUESTIONS

1. COMPLETION OF WORK SHEET FOR DETERMINING PSRO ACTIVITY COSTS

(1) PSRO Staff Completing Work Sheet

Name	Title	Place The Activity Category Number Next To The Person Allocating Costs

(2) Work Sheet Instructions (Work Sheet is Exhibit IV, following page III-4)

Step 1--The fiscal year should be noted in the upper left corner of the work sheet. Make sure all activity costs computed on each work sheet are limited to funds spent in that particular fiscal year. A new work sheet should be used during each fiscal year.

Step 2--Each PSRO employee, staff type, or other resource should be listed under the column so named (i.e., left-most column). This information should be taken from the line item cost summary for the PSRO.

Step 3--The annual salary cost (including fringe) or the annual resource cost should be placed in the next column to match the employee's name, staff type, or resource. Again, this information should be taken from the PSRO budget.

Step 4--Working with the PSRO officials who identified the PSRO activities in Step 3, estimate the percentage of staff time or other resources for each activity in the fiscal year. Time estimates need only be developed for each activity category and do not need to be developed for individual PSRO tasks. Once the activity percentage of time is determined, the actual dollar allocation can be computed as follows:

$$\left(\begin{array}{c}\text{Annual Dollar}\\ \text{Total From}\\ \text{Column 2}\end{array}\right) \times \left(\begin{array}{c}\text{Estimated Percentage of}\\ \text{Staff or Resource Time}\\ \text{Committed to Activity Category}\end{array}\right) = \left(\begin{array}{c}\text{Activity Dollar}\\ \text{Allocation}\end{array}\right)$$

Record the Activity Dollar Allocation in the appropriate box in Exhibit IV.

Step 5--After the Activity Dollar Allocations have been developed for all employees, staff type, and resources, the columns and rows should be summed. This serves as a check to ensure that all costs were allocated to an activity. If the Total Allocated Costs in Exhibit IV does not match the PSRO fiscal year cost reports, then the exhibit should be reviewed to find the error.

Step 6--Any unusual circumstances or costs should be noted by placing a check in the right-most column. A page of comments should be attached to the work sheet referencing the page, line, and column numbers of the cost or circumstance to be noted.

Step 7--The work sheet should be completed for each fiscal year of the PSRO existence.

2. EXIT MEETING

(1) PSRO Staff Attending Exit Meeting

Name	Title

(2) Exit Meeting Agenda

- Summarize findings, present photostatic copy of the activity category descriptions, and answer any questions.
- Indicate that final typewritten copies of the findings for this PSRO will be forwarded to them in approximately 10 days.
- Thank the PSRO Director and staff for their cooperation.

EXHIBIT IV(1)

Office of Planning, Evaluation, and Legislation

WORK SHEET FOR DETERMINING
PSRO ACTIVITY CATEGORY COSTS

Fiscal Year _____, 197__ to _____, 197__

Page ____ of ____

Line Number	Name of Employee or Staff Type, or Resource	Annual Total (Including Fringe Benefits)	Develop System for CR and MCE Review In Acute Care Hospitals	Professional Relations, Initial			Professional Relations, Continuing			Initial Assessment and Baseline Data	Develop Norms, Standards, and Criteria (Cut off at manual publication)	MOU Development	Administration, Initial	
				Physicians	Hospitals	Non-physician Professionals	Physicians	Hospitals	Non-physician Professionals				Salary	Non-personnel
			1	2a	2b	2c	3a	3b	3c	4	5	6	7a	7b
1														
2														
3														
4														
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22														
23														
24														
	Total Budget													

May 9, 1977

Line Number	Administration, General			Plan and Let Data Contract	Data Processing	Refine PSRO Review Plan and Complete Pilot Testing	Implement CR Plans		Implement MCE Plans		Ongoing Criteria Development	Manage, Monitor, and Evaluate Delegated and Nondelegated Review	Areawide MCE's	Non- and Partially-Delegated Review	LTC Review	Ambulatory Care Review	Activities Focused on Nonfederal Patients	Total	Comments *
	Salary	Non-personnel	Space				Training	Hospital assistance	Training	Hospital assistance									
	8a	8b	8c	9	10	11	12a	12b	13a	13b	14	15	16	17	18	19	20		
1																			
2																			
3																			
4																			
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Note: * Where comment is required or desired, check "Comments" column and append notes to page, referending page, line, and column number.

May 9, 1977

IV. POST SITE VISIT TASKS: SUMMARY SHEET, EVALUATION, AND THANK-YOU LETTER

BACKGROUND

There are four post-site tasks that must be performed by the Macro site team, including:

- Exhibit V, Summary of PSRO Expenditures by Activity Category (cost), following page IV-3, and Exhibit VI, Summary of PSRO Expenditures by Activity Category (percentages), following Exhibit V, must be completed.
- Interviewer impressions regarding the accuracy of the data will be documented.
- The interview guide must be finalized and submitted to the project manager.
- A thank-you letter will be sent to the PSRO contact person, enclosing copies of the final typewritten information collected on site.

Each of the above post-site tasks will be described in this section. The first three of the above tasks should be completed within two days of the end of the PSRO visit. The letter will go out within 10 days. The completed interview guide should be reviewed carefully for completeness and accuracy before submission to the project manager. The information will be typed and submitted both to OPEL, as part of the final report, and to the PSRO with the thank-you letter.

QUESTIONS

1. COMPLETE THE COST SUMMARY OF PSRO EXPENDITURES BY ACTIVITY CATEGORY (See Exhibit V, following page IV-3)

Transcribe entries from the bottom of Exhibit IV for each fiscal year (completed in Section III) directly onto Exhibit V. The activity columns sum vertically to identify start-up and operating costs. Comment sheets, if any, from the Work Sheets, i.e., Exhibit IV, should be copied and attached to Exhibit V. Please double check all totals between Exhibits IV and V.

2. COMPLETE THE PERCENTAGE SUMMARY OF PSRO EXPENDITURES BY ACTIVITY CATEGORY

Complete the percentages in Exhibit VI, following Exhibit V, based on the dollar figures in Exhibit V.

3. EVALUATE THE DATA COLLECTED

(1) What were the greatest problems in determining the PSRO activities?_____

_____

_____

_____

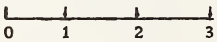
(2) What were the greatest problems in allocating costs to the activities?_____

_____

_____

_____

(3) Everything considered, what level of confidence do you have in the activity descriptions? (Place X on number line)_____



0 - The activity descriptions are of limited value and do not reflect actual activity.
1 - The activity descriptions data are questionable, although they do give a general idea of PSRO activity.
2 - The descriptions provide a solid idea of PSRO activity.
3 - The descriptions of activities are extremely accurate.

(4) Additional comments regarding the accuracy of the descriptions of the PSRO activity._____

_____

_____

_____

_____

_____

(5) Everything considered, what level of confidence do you have in the cost data? (Place X on the number line)

0 - The data are of limited value.

1 - The data indicate a general distribution of costs, but specific data are questionable.
2 - The data provide a reasonable or solid idea of the real cost by activity category.
3 - The cost data probably could not be much more accurate even if time sheets were available.

(6) Additional comments regarding the accuracy of the cost data. _____

_____

_____

_____

4. INTERVIEW GUIDE SUBMITTED TO PROJECT MANAGER

(1) Date Submitted _____

(2) Date Received _____

5. THANK-YOU LETTER AND ATTACHMENTS TO THE PSRO

(See Exhibit VII, following Exhibit VI, for a prototype letter.)

(1) Date Sent _____
(Attach copy)

(2) Courtesy Copies To:

☐ Project Manager

☐ OPEL Project Officer

☐ Other, identify_____

EXHIBIT V

Office of Planning, Evaluation, and Legislation

SUMMARY OF PSRO EXPENDITURES
BY ACTIVITY CATEGORY
(Cost In Thousands)

Activity Category		FY I		FY II		FY III				Check If Comments
Number of Months of Data:		Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	
1. Develop System for CR & MCE Review In Acute Care Hospitals										
2. Professional Relations, Initial:	a. Physicians									
	b. Hospitals									
	c. Non-physician professionals									
3. Professional Relations, Continuing:	a. Physicians									
	b. Hospitals									
	c. Non-physician professionals									
4. Initial Assessment and Baseline Data										
5. Develop Norms, Standards, & Criteria (cut off at manual pub.)										
6. MOU Development										
7. Administration, Initial:	a. Salary									
	b. Non-personnel									
8. Administration, General:	a. Salary									
	b. Non-personnel									
	c. Space									
9. Plan and Let Data Contract										
10. Data Processing										
11. Refine PSRO Review Plan and Complete Pilot Testing										
12. Implement CR Plans:	a. Training									
	b. Hospital assistance									
13. Implement MCE Plans:	a. Training									
	b. Hospital assistance									
14. Ongoing Criteria Development										
15. Manage, Monitor, & Evaluate Delegated & Nondelegated Review										
16. Areawide MCE's										
17. Non- and Partially-Delegated Review										
18. LTC Review										
19. Ambulatory Care Review										
Total Start-Up or Operating Costs										
Total Costs by Fiscal Year										
Start-Up Costs as a Percent of Total Costs										
20. Activities Focused on Nonfederal Patients										

May 9, 1977

EXHIBIT VI

Office of Planning, Evaluation, and Legislation

SUMMARY OF PSRO EXPENDITURES
BY ACTIVITY CATEGORY
(Percentages of Total Annual Expenditures)

Activity Category	Number of Months of Data:	FY I		FY II		FY III				Check If Comments
		Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	Start-Up Costs	Operating Costs	
1. Develop System for CR & MCE Review in Acute Care Hospitals										
2. Professional Relations, Initial:	a. Physicians									
	b. Hospitals									
	c. Non-physician professionals									
3. Professional Relations, Continuing:	a. Physicians									
	b. Hospitals									
	c. Non-physician professionals									
4. Initial Assessment and Baseline Data										
5. Develop Norms, Standards, & Criteria (cut off at manual pub.)										
6. MOU Development										
7. Administration, Initial:	a. Salary									
	b. Non-personnel									
8. Administration, General:	a. Salary									
	b. Non-personnel									
	c. Space									
9. Plan and Let Data Contract										
10. Data Processing										
11. Refine PSRO Review Plan and Complete Pilot Testing										
12. Implement CR Plans:	a. Training									
	b. Hospital assistance									
13. Implement MCE Plans:	a. Training									
	b. Hospital assistance									
14. Ongoing Criteria Development										
15. Manage, Monitor, & Evaluate Delegated & Nondelegated Review										
16. Areawide MCE's										
17. Non- and Partially-Delegated Review										
18. LTC Review										
19. Ambulatory Care Review										
Total Start-Up or Operating Costs										
Total Costs by Fiscal Year										
Start-Up Costs as a Percent of Total Costs										
20. Activities Focused on Nonfederal Patients										

May 9, 1977

EXHIBIT VII

(HSA Letterhead)

PSRO SITE VISIT THANK-YOU LETTER

-Date-

Mr. John Smith
Executive Director
Smithfield Medical Foundation
2426 Trout Circle
Smithfield, Illinois

Dear _____:

On behalf of the Office of Planning, Evaluation, and Legislation (OPEL); Health Services Administration (HSA); the Bureau of Quality Assurance (BQA); and Macro Systems, Inc. (MSI), we wish to thank you for assisting us with the allocation of your PSRO costs to specific activity areas and the development of supporting descriptive material. Our sessions at _____ PSRO were highly productive and will contribute substantially to the overall goal of developing estimates of national costs of PSRO activity.

Enclosed you will find the typed final products of our visit to your PSRO.

(Insert anecdotal line, if appropriate)

It was most enjoyable working with you. Thank you again for your cooperation.

Sincerely,

Dr. Ron Carlson
Deputy Associate Administrator

Office of Planning, Evaluation,
and Legislation

cc: OPEL, Project Officer
MACRO Project Manager

May 9, 1977

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Product Manager Retires

Al Alexander, NTIS Product Manager, retired in early December. The new Chief of the Product and Program Management Division is Dr. Melvin Josephs, who has previously worked for NTIS in other positions. Please continue to address your inquiries concerning NTIS products and services to the Office of Product and Program Management, 5285 Port Royal Road, Springfield, Virginia 22161. (703) 557-4734.

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Sincerely,

Risë L. Burggraff

Risë L. Burggraff
Editor

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National Marine Fisheries Service, Washington, D.C. 1977, 252p
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